PROPOSED HOUSING DEVELOPMENT AT RAHEEN, CO.GALWAY

SERVICES DESIGN REPORT

CLIENT.	GALWAY COUNTY COUNCIL
PROJECT NO.	25156-A
DOCUMENT NO.	25156-A-SDS-XX-RP-C-0001-01
DATE	DECEMBER 11TH, 2025

REV. 01

DOCUMENT TITLE SHEET

Client:	Galway County Council, Galway, Co. Galway. H91 H6KX.
Project Description:	The proposed development at Raheen, Athenry, Co. Galway. The construction of 28no. units (compromising; 10no 2-Bedroom Dwellings; & 18no 3-Bedroom Dwellings) and connection to existing services together with all ancillary site development works.
Project. No.	25156-A

DISCLAIMER

DOCUMENT CONTROL SHEET

PROJECT No:	25156-A				
PROJECT NAME:	Proposed Housing Development at Raheen, Athenry, Co. Galway.				
DOCUMENT REF:	P:\2025\25156 - PKA - Raheen & Pairc na hAbhainn Housing\Design\2 - Civil Design\06. Raheen Service Design Report				
REVISION	DATE	DESCRIPTION	Services Design Report		
01	19/12/2025		PREPARED	CHECKED	ISSUED
		INITIALS:	MW	CD	CD
		DATE:	19/12/2025	19/12/2025	19/12/2025
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		DATE:			

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1 INSTRUCTION

SDS Design Engineers have been appointed by the Client Galway County Council, to prepare a Services Design Report to accompany a Planning Application to Galway County Council for the proposed development at Raheen, Athenry, Co. Galway.

2 PROJECT DETAILS

The proposed development at Raheen, Athenry, Co. Galway comprises of the development of residential dwellings

The proposed development comprises of the following:

- Formation of one new development entrance
- The construction of 28no. units (compromising; 10no 2-Bedroom Dwellings; 18no 3-Bedroom Dwellings)
- All ancillary site development works

Figure 2.1 shows the proposed site layout plan for the new development.

Figure 2.1 – Proposed Site Layout Plan

3 SITE LOCATION, SITE DESCRIPTION

The application site is a greenfield site located in the townland of Raheen, Athenry, Co. Galway. (Figure 3.1). The site is located to the south of the existing Gort Mhaoilir estate. The site has an area of approximately 1.0815 hectares (10,815m2 | 2.67 acres). This application includes all the required drawings for the drainage and Sustainable urban Drainage Design Systems (SuDS), foul, and watermain works.

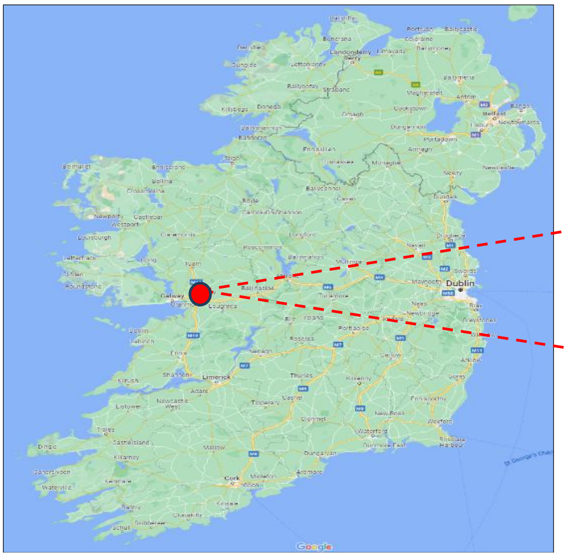


Figure 3.1 - Site Location *(image courtesy of Google Maps)*

Figure 3.2 – Site location at Raheen, Athenry, Co. Galway. *(image courtesy of Google Maps)*

Figure 3.3 – Areal view of proposed site *(image courtesy of Google Maps)*

4 BACKGROUND SURVEYS

4.1.1 SITE TOPOGRAPHY

A topographical survey was conducted by KGSS in July 2025. The proposed runoff from the site will mimic the existing topography of the site. Topographical survey of the existing site is presented in Appendix A.

4.1.2 GROUND CONDITIONS

To ascertain the existing ground counditions a site investigation was carried out by Priority Geotechnical in October 2025. The site invesigation includes the following elements:

- 7 No. Trial Pits
- 7 No. Boreholes
- 4 No. Plate Tests
- 7 No. Infiltration Tests

Figure 4.1 below shows the exten of the site investigation.

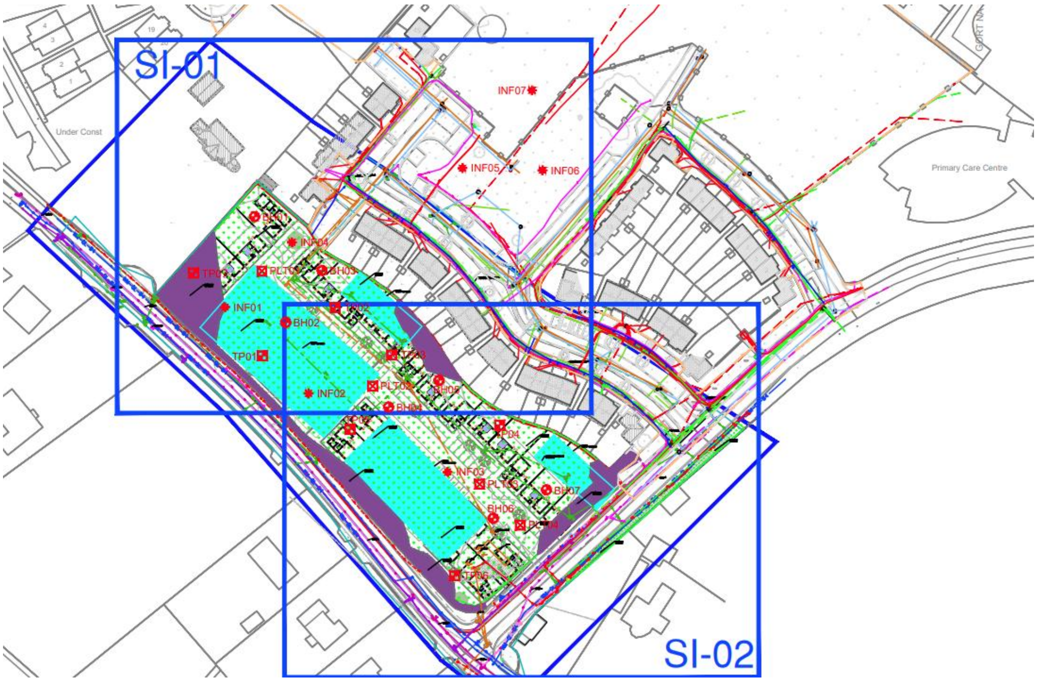


Figure 4.1 Site investigation locations (Source: Priority Geotechnical)

5 FLOOD RISK

To establish if there is a risk of flooding to the proposed development and its location a desktop-based flood risk study was undertaken. As part of this study, several informative reports, studies, and records were reviewed to determine if risk of flooding was an issue. The following sources of information was used in order to determine if the proposed site poses a flood risk:

- Historic flood maps and reports from OPW (www.floodinfo.ie)
- Western Catchment Flood Risk Assessment and Management (CFRAM)
- Galway County Council Development Plan 2022-2028.

5.1 HISTORIC FLOODING

Figure 5.1 below shows past flood events within a 2.0 km zone of Athenry. Flooding was noted in December 2015; the extent of the flooding is unknown.

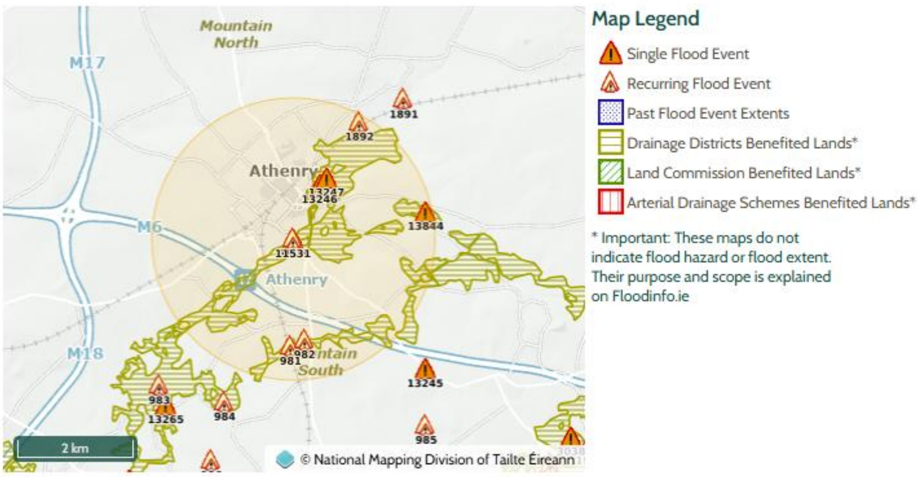


Figure 5.1 – Past flood events within 2.0Km of proposed site (Source: www.floodinfo.ie)

5.2 FLOOD MAPS

Based on a review of the Western Catchment Flood Risk Assessment and Management (CFRAM) study it can be noted that the proposed site is located in flood zone C (where the probability of flooding from rivers and the sea is low (less than 0.1% or 1 in 1000 for both river and coastal flooding)). Figure 5.2 below shows the flood map for the proposed site.

Figure 5.2 – Flood Map (Source: www.floodinfo.ie)

5.3 MITIGATING RISKS

The proposed storm network strategy should not pose a flood risk to the proposed site and surrounding area, as the following mitigating measures will be employed:

- The proposed drainage network will include SuDS features which will be maintained on a regular basis to reduce the risk of a blockage.
- SuDS features are designed in accordance with Greater Dublin Strategic Drainage Study recommendations (1 in 100-year flood event plus 30% climate change due to global warming**).**

6 LOCAL AUTHORITY

Galway County Council will be provided with the relevant drawings and the associated design calculations for the services proposed for this development for consideration.

7 SURFACE WATER STRAGETY

The following section outlines the hierarchy of options when considering the removal and disposal of surface water from site, before outlining a host of potential sustainable urban drainage system (SuDS) techniques considered when designing the surface water collection system for the proposed site. The proposed surface strategy was designed in accordance with the following guidelines/polices:

- The SUDS Manual (C754,2015)
- Galway Development Plan 2022-2028.
- Greater Dublin Strategic Drainage Study (GDSDS)

It is proposed that SuDS techniques are implemented wherever possible to manage surface water runoff from the development. Surface water management proposals for the site have been articulated to mimic the natural drainage patterns of the existing site.

7.1 HIERARCHY OF DISPOSAL

Generally, when designing a proposed surface water collection system, the philosophy of the design should be to prioritise the below methods of discharging surface water run off as much as reasonably practicable, from 1 (most desirable) to 5 (least desirable):

1. Collect for Re-Use
2. into the ground (infiltration),
3. To a surface waterbody,
4. To a surface water sewer, highway drain, or other drainage systems,
5. To a combined sewer.

Table 6.1 below shows a summary of the hierarchy of disposal for the proposed development. The surface water hierarchy of disposal will be based on a priority level 4 due to site constraints.

Table 6.1: Hierarchy of Disposal

Hierarchy		Priority Level	Discharge Location	Availability Y/N	Comments
		1	Collect for Use	N	Rainwater harvesting is deemed unpracticable due to the low water demand.
		2	Into the ground - Infiltration	Y	Due to positive infiltration results we are able to adapt this method to dispose of surface water
		3	To a Surface Waterbody	N	There are no surface waterbodies close to this site and therefore discharge to a surface waterbody has been disregarded
		4	Discharge to a surface water sewer, highway drain, or another drainage system	N	Discharge to an existing local Authority storm network.
		5	Discharge to a combined sewer	N	According to Uisce Eireann records a combined sewer is not present.

1. COLLECT FOR Re-USE

The low water demand for the proposed development does not warrant rain harvesting system as it would involve pumping of water which would outweigh the cost saving and therefore the scheme does not include collection for reuse.

2. INTO THE GROUND - INFILTRATION

Infiltration testing was carried out on site in accordance with BRE Digest 365 by Priority Geotechnical on the 9th October 2025 with such testing subsequently finding infiltration rates ranging from 1.39×10^{-6} m/s to 1.65×10^{-4} m/s. All findings from the infiltration testing carried out by Priority Geotechnical are provided in Appendix B.

3. TO A SURFACE WATERBODY

There are no surface water bodies located in close proximity to this site therefore, this scheme does not include discharge to a surface waterbody in its scheme.

4. DISCHARGE TO A SURFACE WATER, HIGHWAY DRAIN, OR ANOTHER DRAINAGE SYSTEM

Due to positive infiltration results result this was not considered.

5. DISCHARGE TO A COMBINED SEWER

According to Uisce Eireann records a combined sewer is not present near the site and there is no intention to connect to a combined sewer.

7.2 COMPLINACE WITH SuDS PRINCIPLES

7.2.1 COMPLIANCE WITH C573 SuDS MANUAL

The C573 SuDS Manual explains that the primary function of SuDS measures is to protect watercourses from any impact due to the new development. However, SuDS can also improve the quality of life in a new development and urban spaces by making them more vibrant, visually attractive, sustainable and more resilient to change. This document explains the wider social context of SuDS and how SuDS can deliver high quality drainage while supporting urban areas to cope better with sever rainfall both now and in the future. There four pillars of SuDS include:

1. Water Quantity (mitigate flood risk & protect natural water cycle)
2. Water Quality (manage the quality of the runoff to prevent pollution)
3. Amenity (create and sustain better places for people)
4. Biodiversity (create and sustain better places for nature)

7.2.2 SuDS MANAGEMENT TRAIN

The SuDS measures proposed are usually linked in series, and this is commonly known as a SuDS Management Train, (SMT). The SMT ensures that surface runoff is captured, conveyed, stored, intercepted, and removed of pollutant correctly and efficiently before it is discharged back into the surrounding watercourse/network. This approach will ensure that the most effective measures are utilised in the correct sequence throughout the site. Table 26.7 (Figure 7.1) (CIRIA, SuDS Manual 2015) demonstrates the effectiveness of each SuDS measure along the SMT.

TABLE 26.7 Indicative suitability of SuDS components within the Management Train

SuDS component	Interception[1]	Close to source/ primary treatment	Secondary treatment	Tertiary treatment
Rainwater harvesting	Y			
Filter strip	Y	Y		
Swale	Y	Y	Y	
Filter drain	Y		Y	
Permeable pavement	Y	Y		
Bioretention	Y	Y	Y	
Green roof	Y	Y		
Detention basin	Y	Y	Y	
Pond	[3]	Y[2]	Y	Y
Wetland	[3]	Y[2]	Y	Y
Infiltration system (soakaways/ trenches/ blankets/basins)	Y	Y	Y	Y
Attenuation storage tanks	Y[4]			
Catchpits and gullies		Y		
Proprietary treatment systems		Y[5]	Y[5]	Y[5]

Figure 7.1 CIRIA C573 SuDS Manual Table (Source: The SUDS Manual C754,2015)

7.3 SUSTAINABLE DRAINAGE SYSTEMS (SuDS)

The following section outlines the potential SuDS techniques considered for the proposed site, with proposals such as green roofs, Soakaways, swales, and modular systems all being discussed herein.

7.3.1 RAINWATER HARVESTING

Rainwater harvesting (RWH) is the collection of rainwater runoff for use. Runoff can be collected from roofs and other impermeable areas, stored, treated (where required) and then used as a supply water for domestic, commercial and/or institutional properties. As previously discussed RWH will be disproportionate in terms of cost and function with regards to the proposed development features (toilet, sinks etc.) Therefore, rainwater harvesting has been disregarded for this design.

7.3.2GREEN ROOFS

Green roofs comprise a multi-layered system that covers the roof of a building or podium structure with vegetation cover, over a drainage layer. They are designed to intercept and retain precipitation, reducing the volume of run-off and attenuating peak flows. Due to the A-frame roof for the proposed dwellings green roofs have been disregarded.

7.3.3SOAKAWAYS

Soakaways are square or circular excavations either filled with rubble or lined with brickwork, precast concrete or polyethylene rings/perforated storage structures surrounded by granular backfill. They can be grouped and linked together to drain large areas including highways. The supporting structure and backfill can be substituted by modular geo-cellular units. Soakaways provide storm water attenuation, storm water treatment and groundwater recharge. Soakaways have been adapted for this development.

7.3.4 SWALES

Swales are linear vegetated drainage features in which surface water can be stored or conveyed. They can be designed to allow infiltration, where appropriate. They should promote low flow velocities to allow much of the suspended particulate load in the storm water runoff to settle out, thus providing effective pollutant removal. Swales have not been considered for this development.

7.3.5 TREE PITS

Tree pits are beneficial for bioretention as they intercept precipitation, allow water to evaporate from relief surfaces, facilitate infiltration and groundwater recharge due to their root systems, provide shade, and provide further amenity and biodiversity benefits. However, with alternative methods of surface water treatment being proposed site-wide, tree pits have been disregarded for this development.

7.3.6 PERVIOUS PAVEMENTS

Pervious pavements provide a pavement suitable for pedestrian and/or vehicular traffic while allowing rainwater to infiltrate through the surface and into the underlying layers. The water is temporarily stored between infiltration to the ground, reuse or discharge to a watercourse or other drainage system. Pavements with aggregate sub-bases can provide good water quality treatment. When permeable paving for car parking bays is used, the stone sub-base not only stores and slows down the rate of discharge but also raises the water quality. Pervious pavements has been disregarded due to maintenance and the high cost involved.

7.3.7 GEO-CELLULAR / MODULAR SYSTEMS

Modular plastic geo-cellular systems with a high void ratio can be used to create a below ground storage structure. Modular tanks can be used for runoff attenuation but require silt trap protection and a suitable means of access for cleaning and inspection.

7.3.8 PONDS / RAIN GARDENS / INFILTRATION BASINS

Ponds can provide both storm water attenuation and treatment. They are designed to support emergent and submerged aquatic vegetation along their shoreline. Runoff from each rain event is detained and treated in the pool. The retention time promotes removal of silt through sedimentation and the opportunity for biological uptake mechanisms to reduce nutrient concentrations. As the proposed site is residential and ponds have not been considered as it would pose a risk of drowning.

7.3.9 EXISTING SURFACE WATER

Currently, there is existing surface water infrastructure serving the existing Gort Mhaoilir estate is being discharged into two soakaways and an existing swale within the Raheen site. A new infiltration tank will be constructed in the existing Gort Mhaoilir estate to take the surface water run off from the existing Gort Mhaoilir estate. While any additional surface water being taken by the existing soakaway and swale within the Raheen site will now be directed to the proposed infiltration tanks within the proposed site.

7.4 PROPOSED SURFACE WATER COLLECTION SYSTEM

The proposal for this development is to provide a new surface water collection network, collecting water run off from the houses through roof gutters & downpipes. Surface water from roads will be collected through roadside gullies. A series of SUDS features will be incorporated as outlined in Section 7.3

There is currently two existing soakaways and an existing swale located on the site that is taken the surface water runoff from the existing Gort Mhaoilir estate and from the existing Gort Mhaoilir road. In order to take the surface water from the existing Gort Mhaoilir estate a new infiltration tank will be created within the green space of this estate to take this surface water runoff. In order to take the additional run off coming into these existing soakaways and swales and the new surface water from the proposed development for this site two infiltration tanks will be constructed to deal with this. Both tanks will be positioned in green space within the proposed development. Prior to the surface water being directed into each infiltration tank the surface water will pass through a Klargester NSBE010 Bypass Petrol and Oil Separator and it will then enter each of the proposed infiltration tanks.

7.4.1 SURFACE WATER ATTENUATION SYSTEM

As previously mentioned, the surface water attenuation system includes 2 No. Graf EcoBloc Infiltration tanks. Both tanks have a cumulative surface water storage volume of approx. 119m3 that will mean a total storage of 238m3 between the two tanks. This has been designed to provide storage for the surface water generated in a 1 in 100-year rainfall event. The rainfall generated in such an event will be increased by an allowance of 30% to cater for predicted climate change due to global warming as per GDSDS requirements. This storage volume of 238m3 will be adequate in terms of treating and storing surface water in the event of the aforementioned rainfall event. For calculations regarding surface water attenuation system design, please see appendix C, where a maximum rainfall volume to treat of 117m3 is calculated. Whilst carrying out the surface water attenuation design, rainfall return period data was utilised from Met Eireann, which is viewable in Appendix D.

PROPOSED SUDS STRATEGY

The proposed SuDS features will be integrated into the surface water drainage network for the proposed development, with the main objective of controlling the quantity of surface water runoff, managing the quality of runoff to prevent pollution, and creating sustaining local ecosystems. The proposed SuDS strategy for the site include the following:

- 2 No. Graf EcoBloc Infiltration Tanks – The 2 No. proposed infiltration tanks shall assist with providing optimal surface water storage on site.
- 2 No. Petrol Interceptor – The 2 No. proposed class 1 petrol interceptors shall cleanse the surface water prior to discharging into the proposed infiltration tanks.

8 PROPOSED WASTEWATER SEWER SYSTEM

The proposed wastewater sewer and sewer diversion will be constructed in accordance with the following:

- BS EN 752:2008 – Drain & Sewer Systems Outside Buildings,
- Building Regulations - TGD Part H – Drainage and Wastewater Disposal.
- Uisce Eireann Standard Details & Code of Practice.

On the Grounds of the Raheen site there is an existing sewage treatment plant. This treatment plant is to be decommissioned along with the wastewater sewer within the site. There is to be a new 225mm uPVC wastewater sewer that will be proposed to intercept the existing wastewater sewer to the north west of the site and will run down through the centre of the proposed development. This wastewater sewer will then connect to an existing 225mm diameter wastewater sewer outside of the site boundary to the south east of the site. This new 225mm uPVC wastewater sewer and accompanying manholes will be built in accordance with Uisce Eireann standard details and code of practice.

For further detail of the proposed wastewater network and the connections to the existing wastewater network please see drawing 25156-A-3021-PL2.

8.1 WASTEWATER LOADING RATES

The following table 8.1 shows the wastewater discharge rates from the proposed residential development. The population of 2.7 persons/dwelling is from the Uisce Eireann Code of Practice. Daily Demand per person is 150 l/day.

Table 8.1 - Estimated Foul Demand

Residential Wastewater Demand							
Use	No. of Units	Occupancy Rate (persons/ dwelling)	Population (P)	Daily Demand per Population (l/day)	Average daily domestic demand (l/day)	Average Flow (l/s)	Peak Flow (l/s)
Residential	28	2.7	75.6	150	11,340	0.131	0.819

The overall daily wastewater loading is 11,340 litres/day or 11.340m^3 day. As mentioned above, the proposed foul sewer system will be connected to the existing foul sewer network to the north of the proposed development. A pre-connection enquiry was submitted to Irish Water for the proposed development (CDS25009420).

9 POTABLE WATER SUPPLY

9.1 EXISTING WATER SUPPLY

Following the review of the Topo survey completed by KGSS there is an existing 100mm uPVC watermain situated in the existing footpath which runs along the front of the proposed Raheen site to the east boundary of the development.

9.2 PROPOSED WATER SUPPLY

A new 100mm diameter watermain will be constructed within the proposed site to serve all units. This new watermain will connect to an existing watermain to the northern part of the site.

The water demand is calculated in accordance with Code of Practice for Water Infrastructure, Connections and Developer Services, Design & Construction Requirements for Self-Lay Developments, July 2020 (Revision 2)', Section 3.7.2. The total peak average flow for the residential use will be 0.144 l/s with a peak flow of 0.801 l/s.

The proposed connection for the proposed development will be made in accordance with Irish Water Standard Details for Non-Mechanical Meter Chamber (40-250mm diameter): Ref. STD-W-26-Rev 03. Please refer to drawing 25156-A-3022-PL2 for the location and details of the proposed watermains network and fire hydrants proposed for this new site layout. A pre-connection application was submitted to Uisce Eireann for this proposed development, and a Confirmation of Feasibility was issued by UE. Reference number CDS25009420.

Table 9.1 - Estimated Water Demand

Residential/Commercial Water Demand							
Use	No. of Units	Occupancy Rate (persons/ dwelling)	Population (P)	Daily Demand per Population (l/day)	Average daily domestic demand (l/day)	Average Flow (l/s)	Peak Flow (l/s)
Residential	28	2.7	75.6	150	12,474	0.144	0.801

9.3 FIRE HYDRANTS

It is proposed to provide 3 No. fire hydrant on the new watermain. Hydrants shall comply with the requirements of BS 750:2012 and shall be installed in accordance with Irish Waters Code of Practice and Standard Details.

10 SUMMARY AND CONCLUSIONS

SURFACE WATER SYSTEM

The proposed surface water network on site will consists of gutters, pipework, gullies, various SUDS features and 2 No. Graf EcoBloc infiltration Tank. These SuDS features and infiltration tanks are to work in tandem to provide a cumulative surface water storage capacity of circa 238m^3. This proposed design achieves compliance with all previously stated regulations whilst considering the constraints of the site.

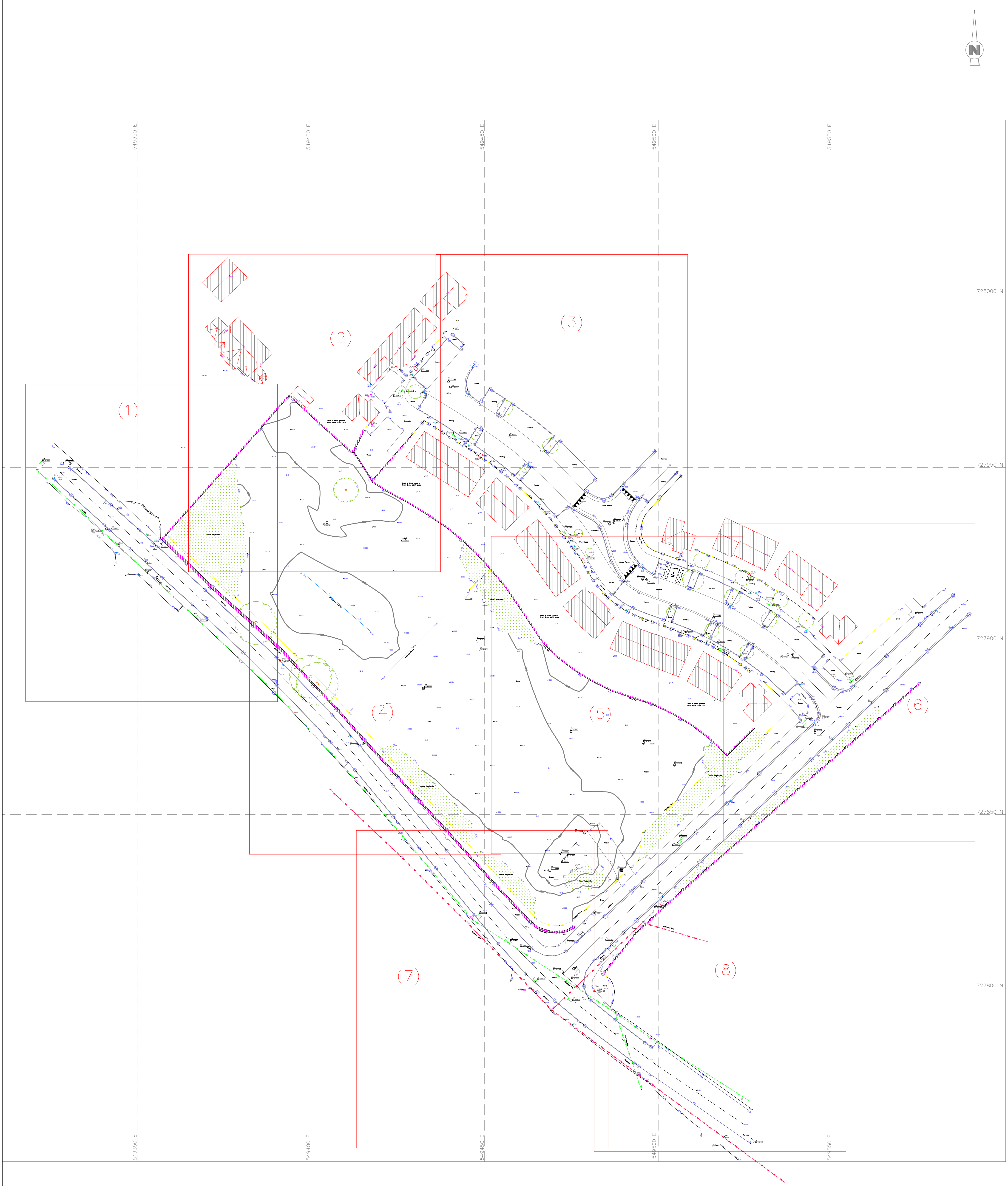
WASTEWATER SYSTEM

The total wastewater loading from the site will be 11.340m^3/day, with a peak flow of 0.819 l/s.

WATERMAINS

The total volume of water required by the proposed development will be circa 12.474m^3/day, with a peak flow of 0.801 l/s.

APPENDIX A – TOPGRAPHICAL SURVEY



LEGEND :

Symbol	Symbol	Symbol
Survey Point	Manhole (General)	Survey Point Level 100.00
Contour 34.0	Storm Water	Roof / Wall Level 200.00
Fencing	Foul Water	
Gate	Access Junction AJ	Digitised TÉ data:
Building / Structure	Sluice Valve SV	Folio Setout:
Wall	Fire hydrant FH	
Road Edge	Water Meter WM	Setout Coordinate S/O Pt: E:100.00 N:100.00
Kerbed Road	Telecom Pole TP	
Path / Track	ESB Pole EP	Window
Banking / Drain	Lamp Post LP	Door
Detail	Sign Post Sign	Structural H Beam
Overhead Detail	Traffic Light TL	
Overhead ESB (ESB)	Bollard Bol	
Overhead Telecom (TEL)	Radon Sump Radon	
	Earth Rod Er	
Vegetation	Gas Valve Gas	
Tree Trunk		
Tree Spread		

KGSS

Client: SDS Design Engineers	Survey Type: Topographic	Drawing No: KP	Project No. KG25305	Project Location: Raheen, Athenry, Co. Galway	
Horizontal Datum: ITM IRENET95 / EPSG: 2157	Level Datum: OSGM15	Scale: 1:1000 A3	Surveyed By: UR	Survey Finish Date: 14/07/2025	Drafted By: UR/KD — Issue Date: 21/07/2025

Survey Notes:

- There were large areas of dense vegetation/other materials on this site that would need to be cleared before surveying accurately
- Any boundaries shown may not define the legal boundary between properties.
- It is strongly recommended that a CCTV/GPR survey is undertaken in order to locate any underground services that are not visible/accessible from the surface.
- Please report any anomalies to the KGSS office for rectification.

Modifications	Date	Rev.

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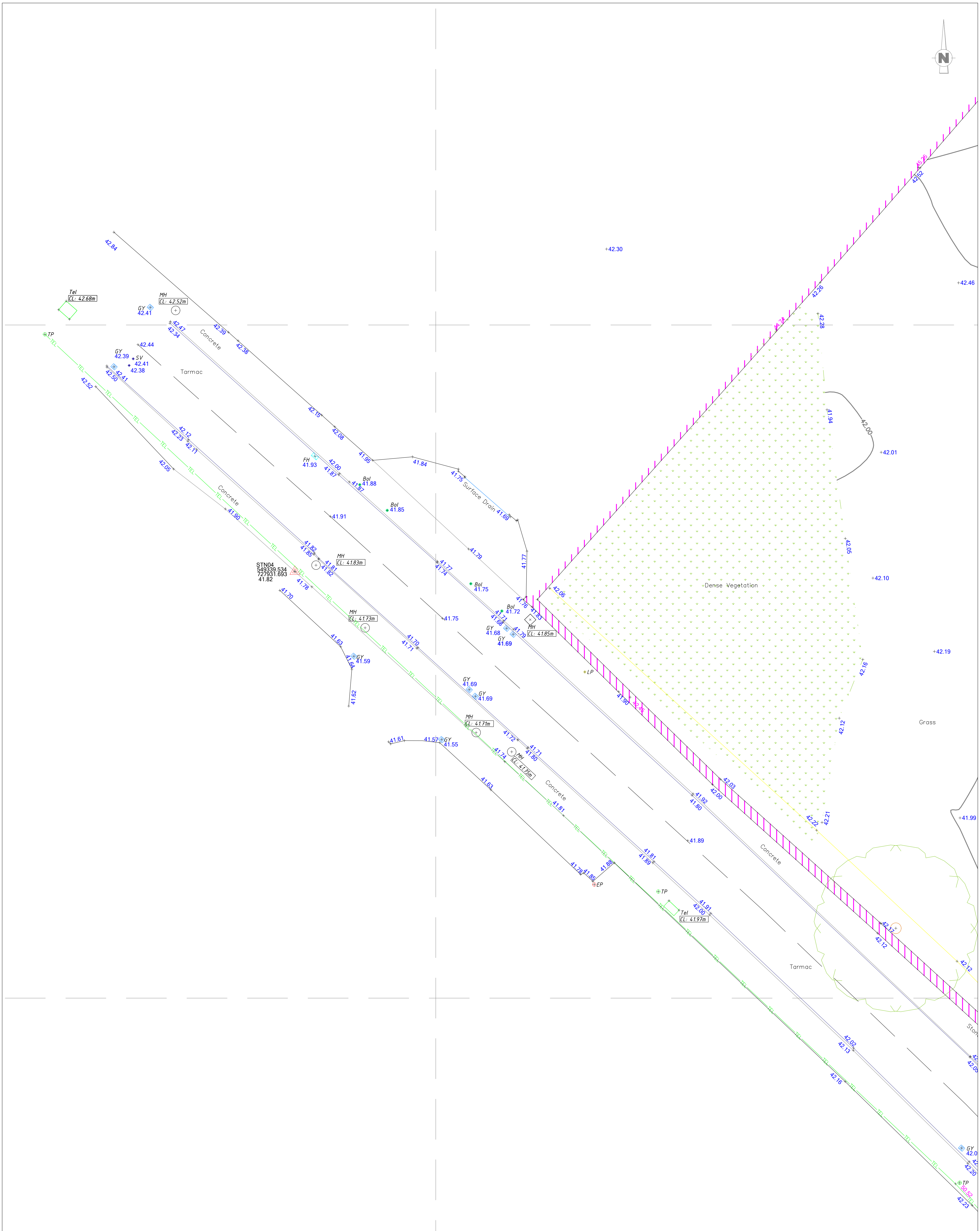

LEGEND :

Survey Point		Manhole (General)		Survey Point Level	100.00
Contour	34.0	Storm Water		Roof / Wall Level	200.00
Fencing		Foul Water			
Gate		Access Junction	AJ	Digitised TÉ data:	
Building / Structure		Sluice Valve	SV	Folio Setout:	
Wall		Fire hydrant	FH		
Road Edge		Water Meter	WM	Setout Coordinate	S/O Pt: E:100.00 N:100.00
Kerbed Road		Telecom Pole	TP		
Path / Track		ESB Pole	EP	Window	
Banking / Drain		Lamp Post	LP	Door	
Detail		Sign Post	Sign	Structural H Beam	
Overhead Detail		Traffic Light	TL		
Overhead ESB	ESB	Bollard	Bol		
Overhead Telecom	TEL	Radon Sump	Radon		
		Earth Rod	Er		
Vegetation		Gas Valve	Gas		
Tree Trunk					
Tree Spread					

KGSS

Client:	Survey Type:	Drawing No:	Project No.	Project Location:		
SDS Design Engineers	Topographic	(1)	KG25305	Raheen, Athenry, Co. Galway		
Horizontal Datum: ITM IRENET95 / EPSG: 2157	Level Datum: OSGM15	Scale: 1:250 A3	Surveyed By: UR	Survey Finish Date: 14/07/2025	Drafted By: UR/KD	Issue Date: 21/07/2025

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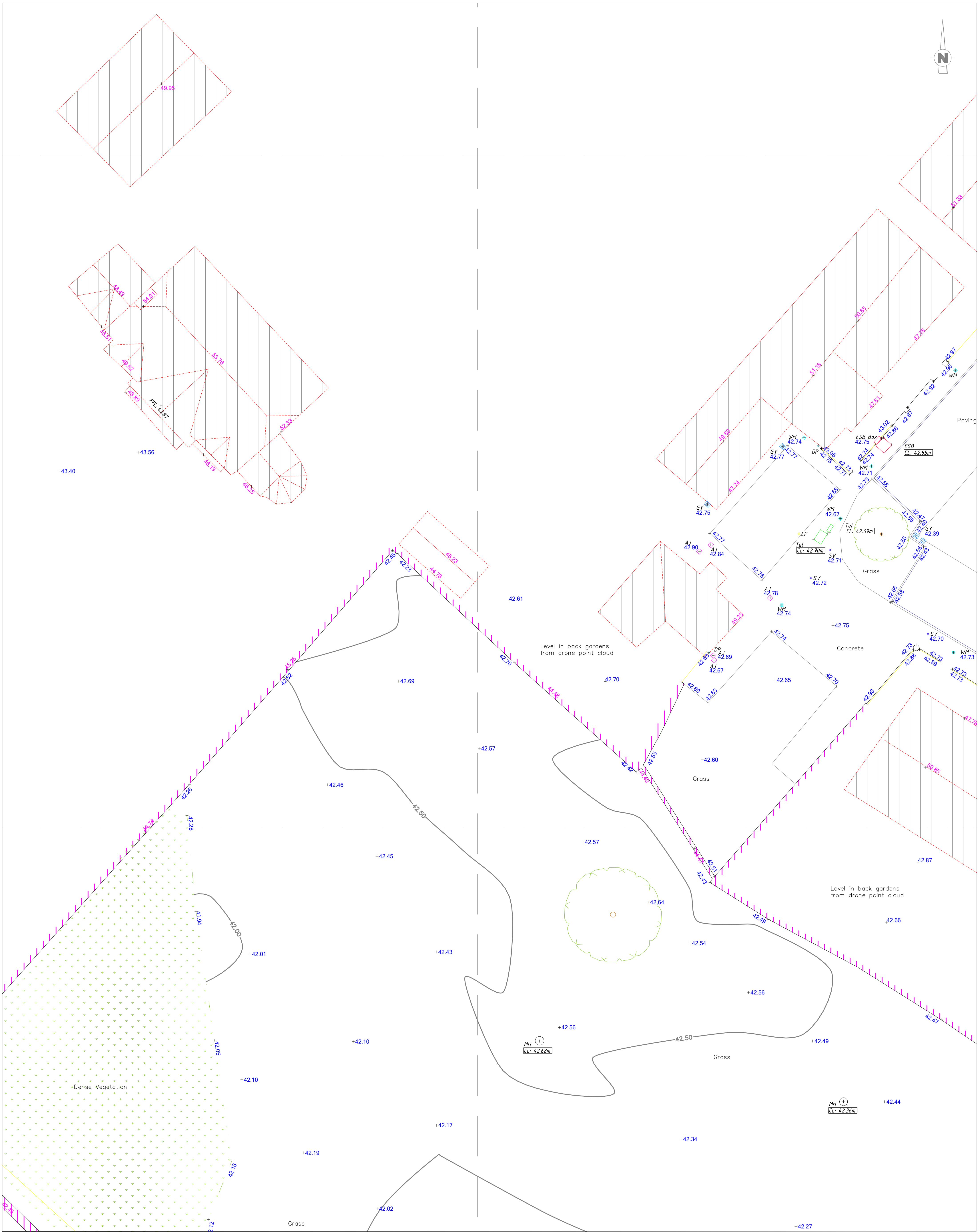

LEGEND :

Survey Point	Manhole (General)	Survey Point Level 100.00
Contour	Storm Water	Roof / Wall Level 200.00
Fencing	Foul Water	
Gate	Access Junction	Digitised TÉ data:
Building / Structure	Sluice Valve	Folio Setout:
Wall	Fire hydrant	
Road Edge	Water Meter	Setout Coordinate
Kerbed Road	Telecom Pole	
Path / Track	ESB Pole	Window
Banking / Drain	Lamp Post	Door
Detail	Sign Post	Structural H Beam
Overhead Detail	Traffic Light	
Overhead ESB	Bollard	
Overhead Telecom	Radon Sump	
	Earth Rod	
Vegetation	Gas Valve	
Tree Trunk		
Tree Spread		

KGSS

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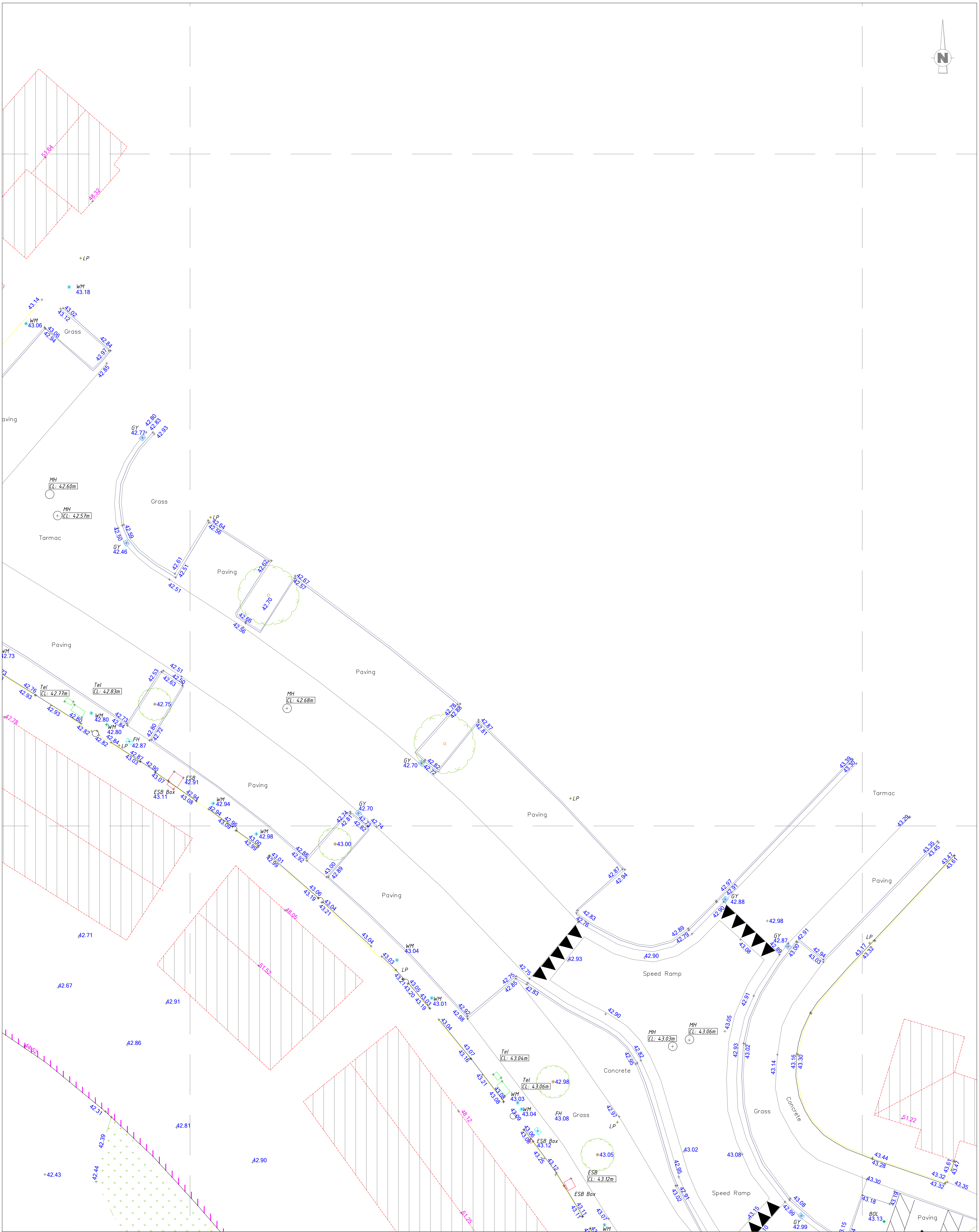

LEGEND :

Survey Point	Manhole (General)	Survey Point Level 100.00
Contour	Storm Water	Roof / Wall Level 200.00
Fencing	Foul Water	
Gate	Access Junction	Digitised TÉ data:
Building / Structure	Sluice Valve	Folio Setout:
Wall	Fire hydrant	
Road Edge	Water Meter	Setout Coordinate
Kerbed Road	Telecom Pole	
Path / Track	ESB Pole	Window
Banking / Drain	Lamp Post	Door
Detail	Sign Post	Structural H Beam
Overhead Detail	Traffic Light	
Overhead ESB	Bollard	
Overhead Telecom	Radon Sump	
	Earth Rod	
Vegetation	Gas Valve	
Tree Trunk		
Tree Spread		

KGSS

Client:	Survey Type:	Drawing No:	Project No.	Project Location:	
SDS Design Engineers	Topographic	(3)	KG25305	Raheen, Athenry, Co. Galway	
Horizontal Datum:	Level Datum:	Scale:	Surveyed By:	Survey Finish Date:	Drafted By: / Issue Date:
ITM IRENET95 / EPSG: 2157	OSGM15	1:250 A3	UR	14/07/2025	UR/KD / 21/07/2025

Survey Notes:

- There were large areas of dense vegetation/other materials on this site that would need to be cleared before surveying accurately.
- Any boundaries shown may not define the legal boundary between properties.
- It is strongly recommended that a CCTV/GPR survey is undertaken in order to locate any underground services that are not visible/accessible from the surface.
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Modifications	Date	Rev.

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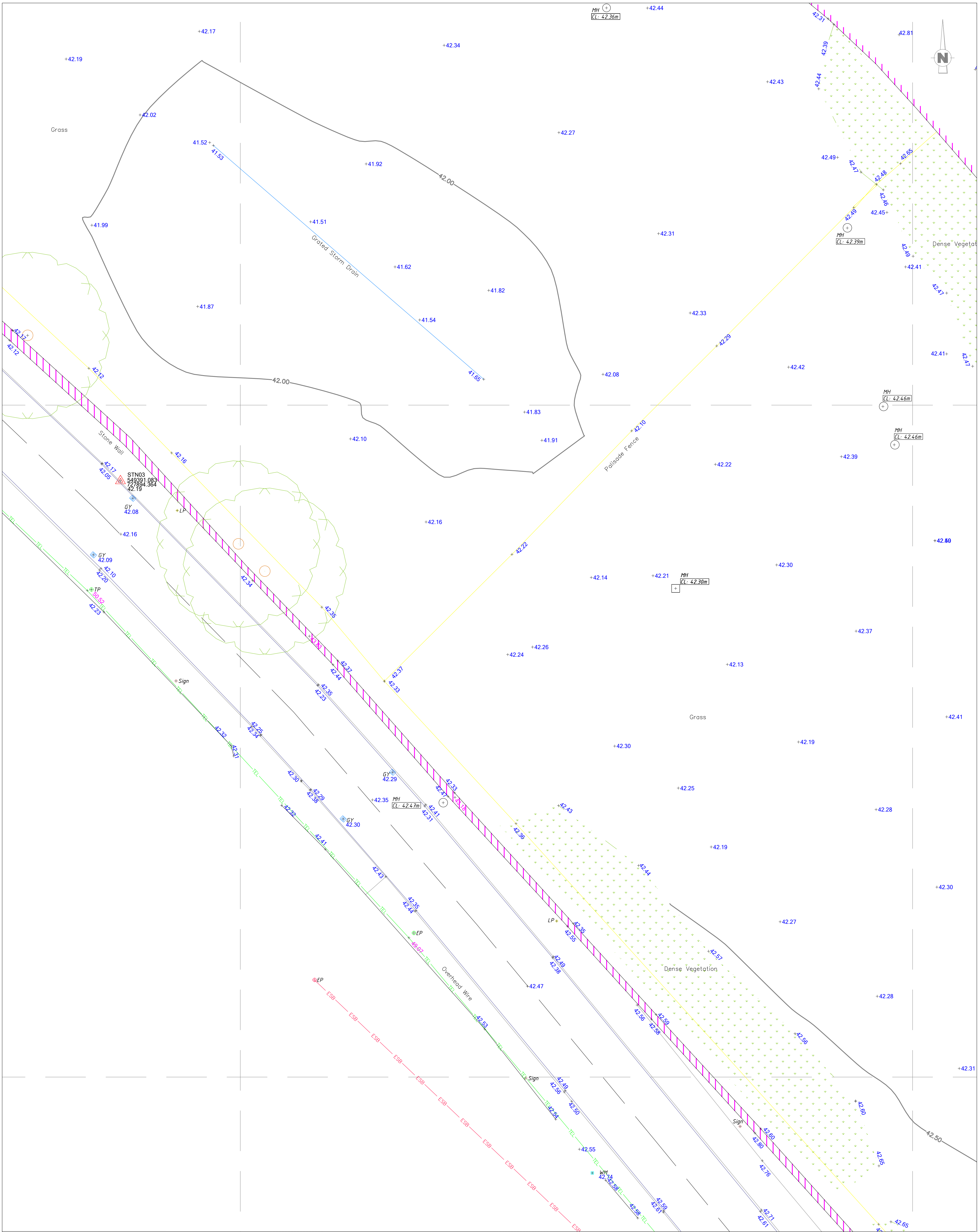

LEGEND :

Survey Point		Manhole (General)		Survey Point Level	100.00
Contour	34.0	Storm Water		Roof / Wall Level	200.00
Fencing		Foul Water			
Gate		Access Junction	AJ	Digitised TÉ data:	
Building / Structure		Sluice Valve	SV	Folio Setout:	
Wall		Fire hydrant	FH		
Road Edge		Water Meter	WM	Setout Coordinate	S/O Pt: E:100.00 N:100.00
Kerbed Road		Telecom Pole	TP		
Path / Track		ESB Pole	EP	Window	
Banking / Drain		Lamp Post	LP	Door	
Detail		Sign Post	Sign	Structural H Beam	
Overhead Detail		Traffic Light	TL		
Overhead ESB	ESB	Bollard	Bol		
Overhead Telecom	TEL	Radon Sump	Radon		
		Earth Rod	Er		
Vegetation		Gas Valve	Gas		
Tree Trunk					
Tree Spread					

KGSS

Client:	Survey Type:	Drawing No:	Project No.	Project Location:		
SDS Design Engineers	Topographic	(4)	KG25305	Raheen, Athenry, Co. Galway		
Horizontal Datum: ITM IRENET95 / EPSG: 2157	Level Datum: OSGM15	Scale: 1:250 A3	Surveyed By: UR	Survey Finish Date: 14/07/2025	Drafted By: UR/KD	Issue Date: 21/07/2025

Survey Notes:

- There were large areas of dense vegetation/other materials on this site that would need to be cleared before surveying accurately
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Modifications	Date	Rev.

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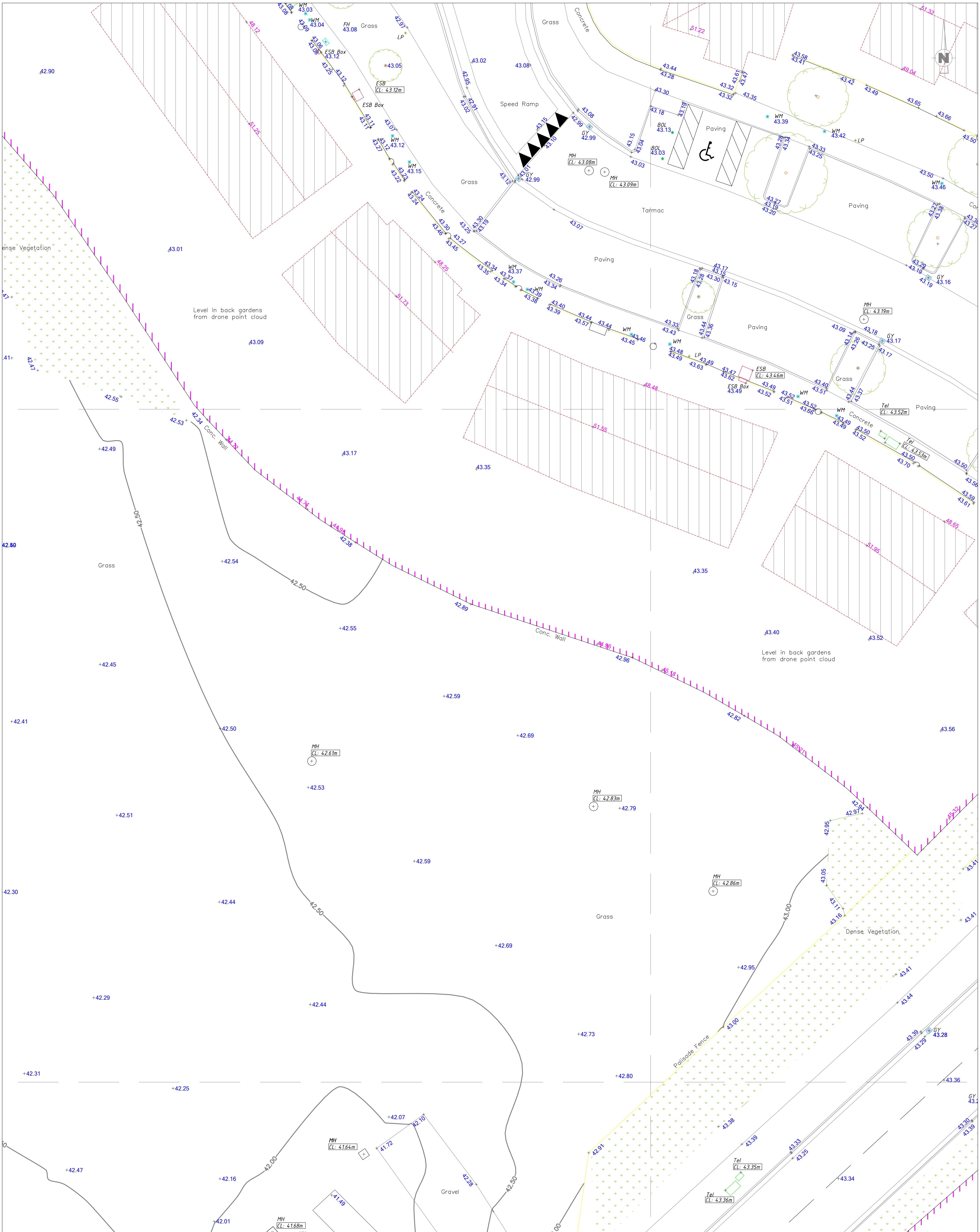

LEGEND :

Survey Point	Manhole (General)	Survey Point Level 100.00
Contour	Storm Water	Roof / Wall Level 200.00
Fencing	Foul Water	
Gate	Access Junction (AJ)	Digitised TÉ data:
Building / Structure	Sluice Valve (SV)	Folio Setout:
Wall	Fire hydrant (FH)	
Road Edge	Water Meter (WM)	Setout Coordinate (S/O Pt: E:100.00 N:100.00)
Kerbed Road	Telecom Pole (TP)	
Path / Track	ESB Pole (EP)	Window
Banking / Drain	Lamp Post (LP)	Door
Detail	Sign Post (Sign)	Structural H Beam
Overhead Detail	Traffic Light (TL)	
Overhead ESB	Bollard (Bol)	
Overhead Telecom	Radon Sump (Radon)	
	Earth Rod (Er)	
Vegetation	Gas Valve (Gas)	
Tree Trunk		
Tree Spread		

KGSS

Client:	Survey Type:	Drawing No:	Project No.	Project Location:	
SDS Design Engineers	Topographic	(5)	KG25305	Raheen, Athenry, Co. Galway	
Horizontal Datum:	Level Datum:	Scale:	Surveyed By:	Survey Finish Date:	Drafted By: / Issue Date:
ITM IRENET95 / EPSG: 2157	OSGM15	1:250 A3	UR	14/07/2025	UR/KD / 21/07/2025

Survey Notes:

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- Any boundaries shown may not define the legal boundary between properties.
- It is strongly recommended that a CCTV/GPR survey is undertaken in order to locate any underground services that are not visible/accessible from the surface.
- Please report any anomalies to the KGSS office for rectification.

Modifications	Date	Rev.

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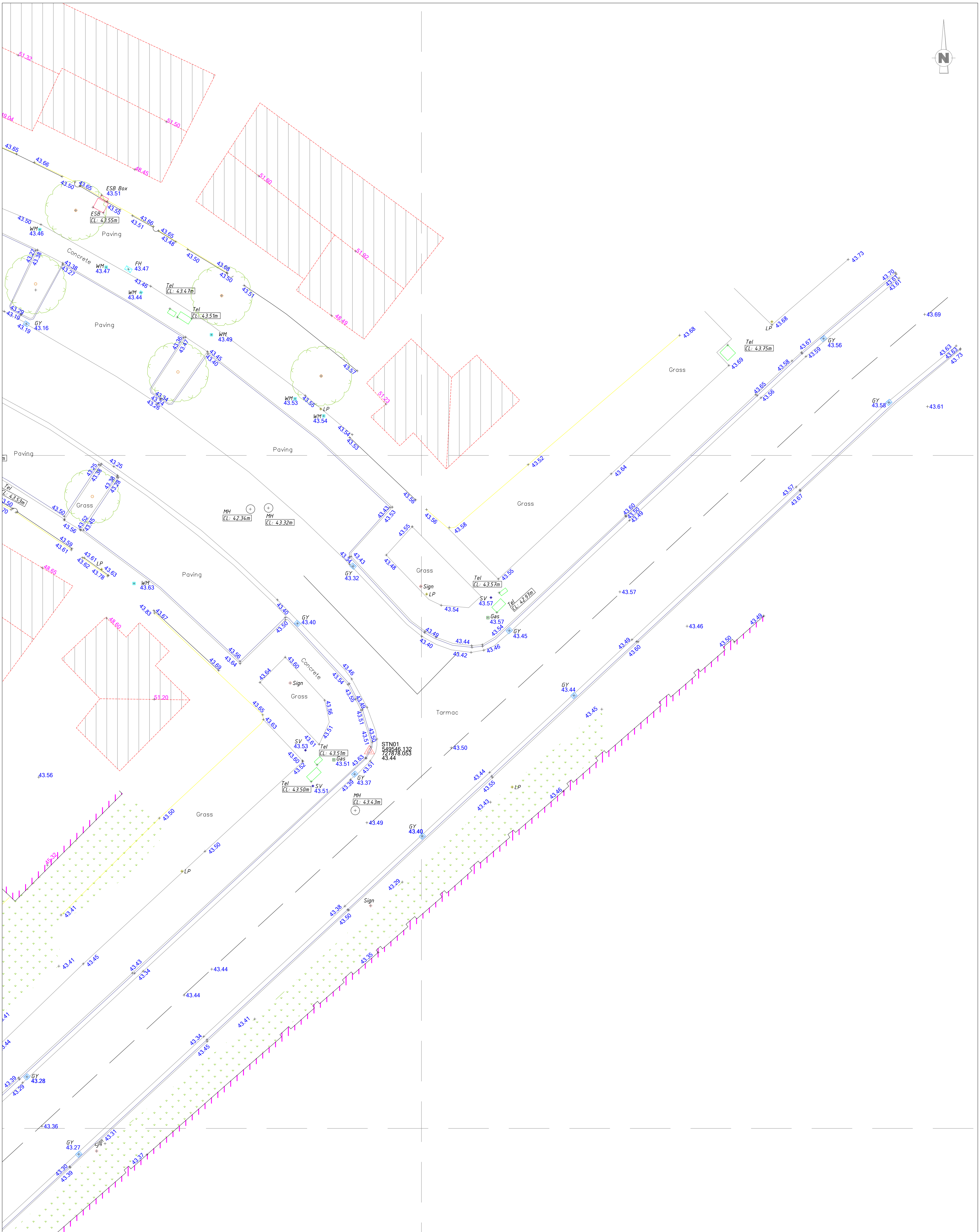

LEGEND :

Survey Point		Manhole (General)		Survey Point Level	100.00
Contour	34.0	Storm Water		Roof / Wall Level	200.00
Fencing		Foul Water			
Gate		Access Junction	AJ	Digitised TÉ data:	
Building / Structure		Sluice Valve	SV	Folio Setout:	
Wall		Fire hydrant	FH		
Road Edge		Water Meter	WM	Setout Coordinate	S/O Pt: E:100.00 N:100.00
Kerbed Road		Telecom Pole	TP		
Path / Track		ESB Pole	EP	Window	
Banking / Drain		Lamp Post	LP	Door	
Detail		Sign Post	Sign	Structural H Beam	
Overhead Detail		Traffic Light	TL		
Overhead ESB	ESB	Bollard	Bol		
Overhead Telecom	TEL	Radon Sump	Radon		
		Earth Rod	Er		
Vegetation		Gas Valve	Gas		
Tree Trunk					
Tree Spread					

KGSS

Client:	Survey Type:	Drawing No:	Project No.	Project Location:	
SDS Design Engineers	Topographic	(6)	KG25305	Raheen, Athenry, Co. Galway	
Horizontal Datum: ITM IRENET95 / EPSG: 2157	Level Datum: OSGM15	Scale: 1:250 A3	Surveyed By: UR	Survey Finish Date: 14/07/2025	Drafted By: UR/KD · Issue Date: 21/07/2025

Survey Notes:

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Modifications	Date	Rev.

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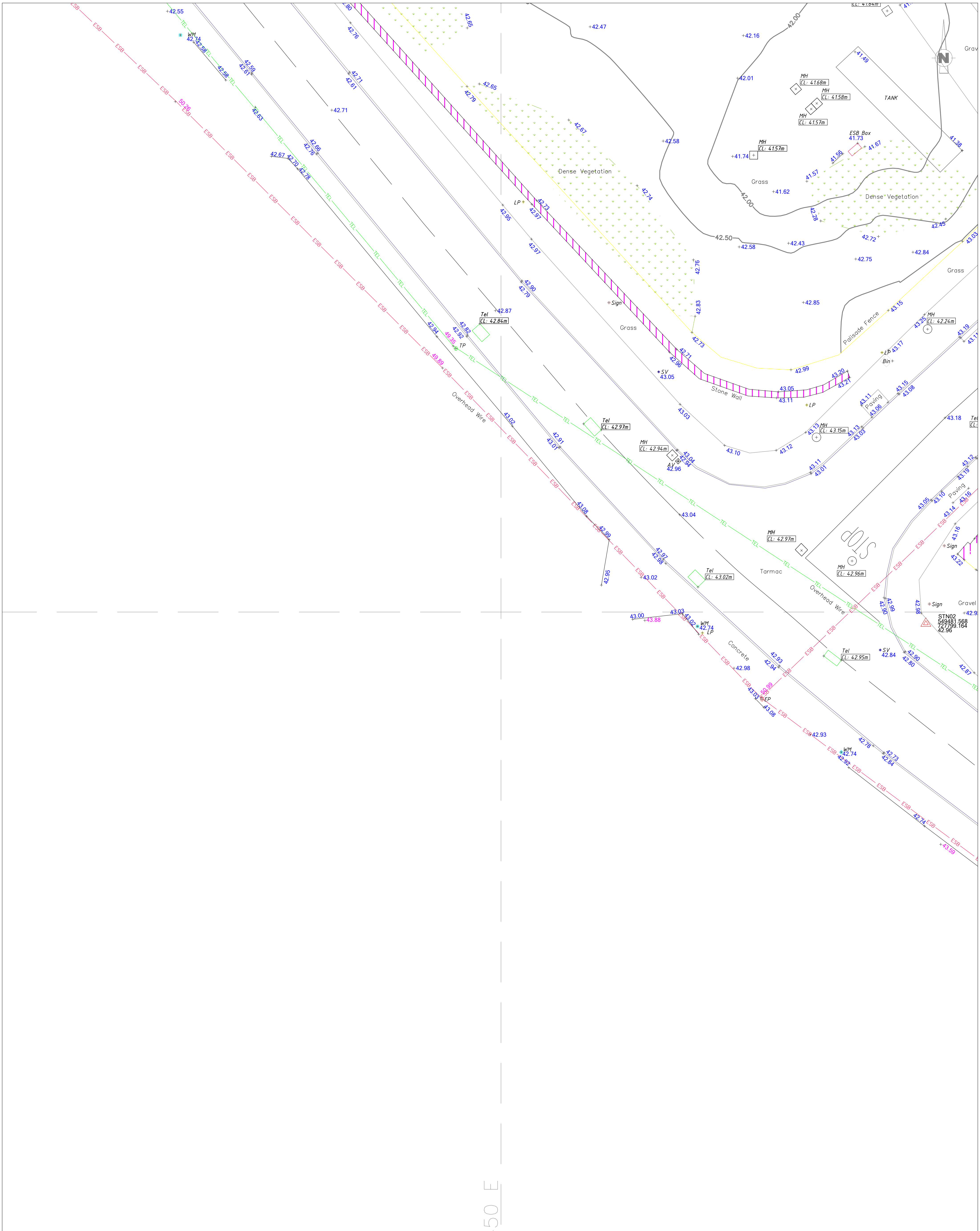

LEGEND :

Survey Point		Manhole (General)		Survey Point Level	100.00
Contour	34.0	Storm Water		Roof / Wall Level	200.00
Fencing		Foul Water			
Gate		Access Junction	AJ	Digitised TÉ data:	
Building / Structure		Sluice Valve	SV	Folio Setout:	
Wall		Fire hydrant	FH		
Road Edge		Water Meter	WM	Setout Coordinate	S/O Pt: E:100.00 N:100.00
Kerbed Road		Telecom Pole	TP		
Path / Track		ESB Pole	EP	Window	
Banking / Drain		Lamp Post	LP	Door	
Detail		Sign Post	Sign	Structural H Beam	
Overhead Detail		Traffic Light	TL		
Overhead ESB	ESB	Bollard	Bol		
Overhead Telecom	TEL	Radon Sump	Radon		
		Earth Rod	Er		
Vegetation		Gas Valve	Gas		
Tree Trunk					
Tree Spread					

KGSS

Client: SDS Design Engineers	Survey Type: Topographic	Drawing No: (7)	Project No. KG25305	Project Location: Raheen, Athenry, Co. Galway		
Horizontal Datum: ITM IRENET95 / EPSG: 2157	Level Datum: OSGM15	Scale: 1:250 A3	Surveyed By: UR	Survey Finish Date: 14/07/2025	Drafted By: UR/KD	Issue Date: 21/07/2025

Survey Notes:

- There were large areas of dense vegetation/other materials on this site that would need to be cleared before surveying accurately
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Modifications	Date	Rev.

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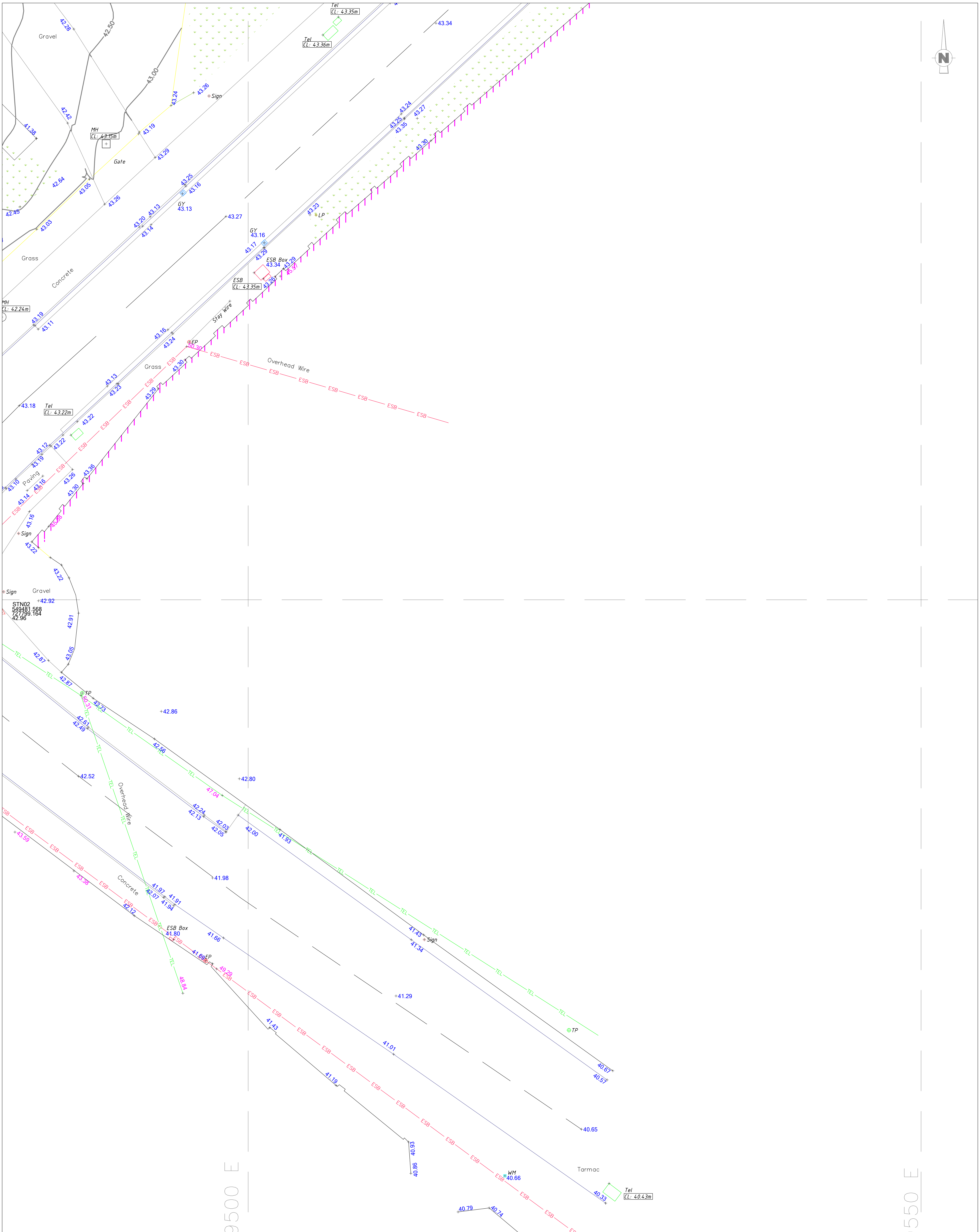

LEGEND :

Survey Point		Manhole (General)		Survey Point Level	100.00
Contour	34.0	Storm Water		Roof / Wall Level	200.00
Fencing		Foul Water			
Gate		Access Junction	AJ	Digitised TÉ data:	
Building / Structure		Sluice Valve	SV	Folio Setout:	
Wall		Fire hydrant	FH		
Road Edge		Water Meter	WM	Setout Coordinate	S/O Pt: E:100.00 N:100.00
Kerbed Road		Telecom Pole	TP		
Path / Track		ESB Pole	EP	Window	
Banking / Drain		Lamp Post	LP	Door	
Detail		Sign Post	Sign	Structural H Beam	
Overhead Detail		Traffic Light	TL		
Overhead ESB	ESB	Bollard	Bol		
Overhead Telecom	TEL	Radon Sump	Radon		
		Earth Rod	Er		
Vegetation		Gas Valve	Gas		
Tree Trunk					
Tree Spread					

KGSS

Client: SDS Design Engineers	Survey Type: Topographic	Drawing No: (8)	Project No. KG25305	Project Location: Raheen, Athenry, Co. Galway
Horizontal Datum: ITM IRENET95 / EPSG: 2157	Level Datum: OSGM15	Scale: 1:250 A3	Surveyed By: UR	Survey Finish Date: 14/07/2025 · Drafted By: UR/KD · Issue Date: 21/07/2025

Survey Notes:

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Modifications	Date	Rev.

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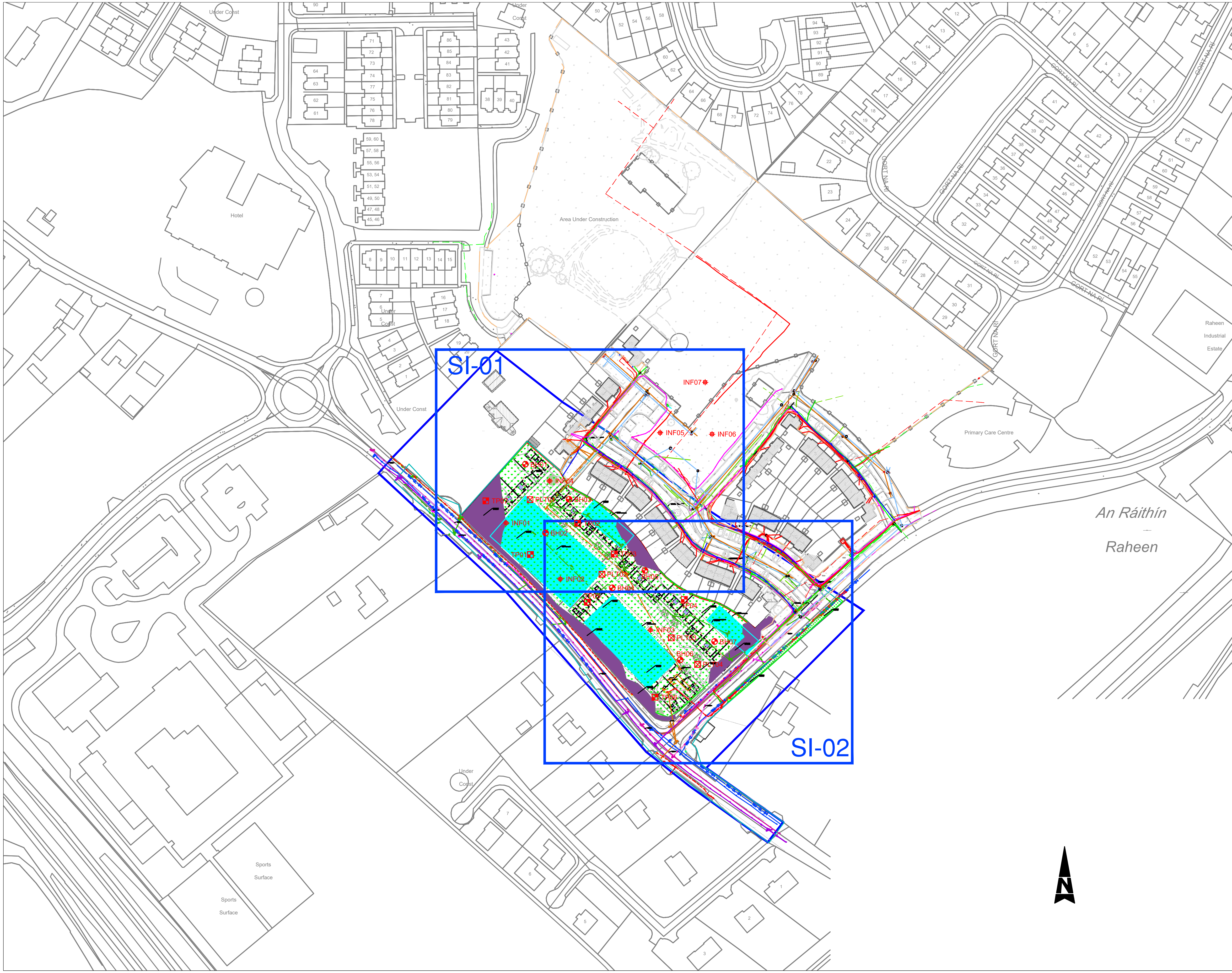
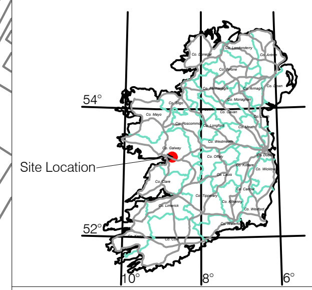
APPENDIX B – SITE INVESTIGATION



Priority Geotechnical Site



JOB NAME:

Raheen,
Athenry,
Co. Galway.

Sheet Title:

Exploratory Location Layout

JOB NUMBER:

P25183

DRAWING NUMBER:

P25183-SI-A

DRAWN BY:

Gary Curtin

DATE:

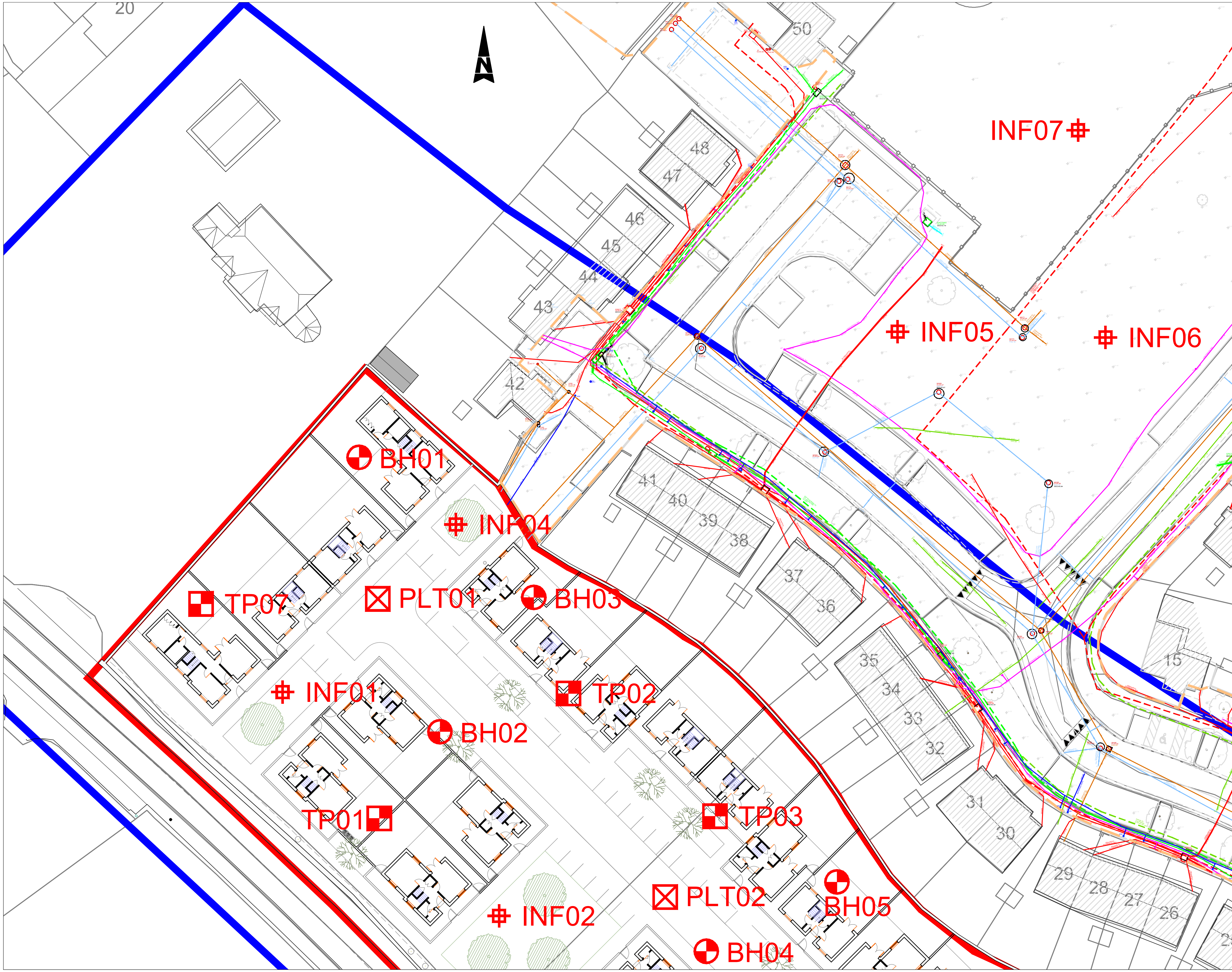
13/10/2025

SCALE:	APPROVED:
1:2000 ON A3	GH

REVISION:

D01

pgl priority geotechnical

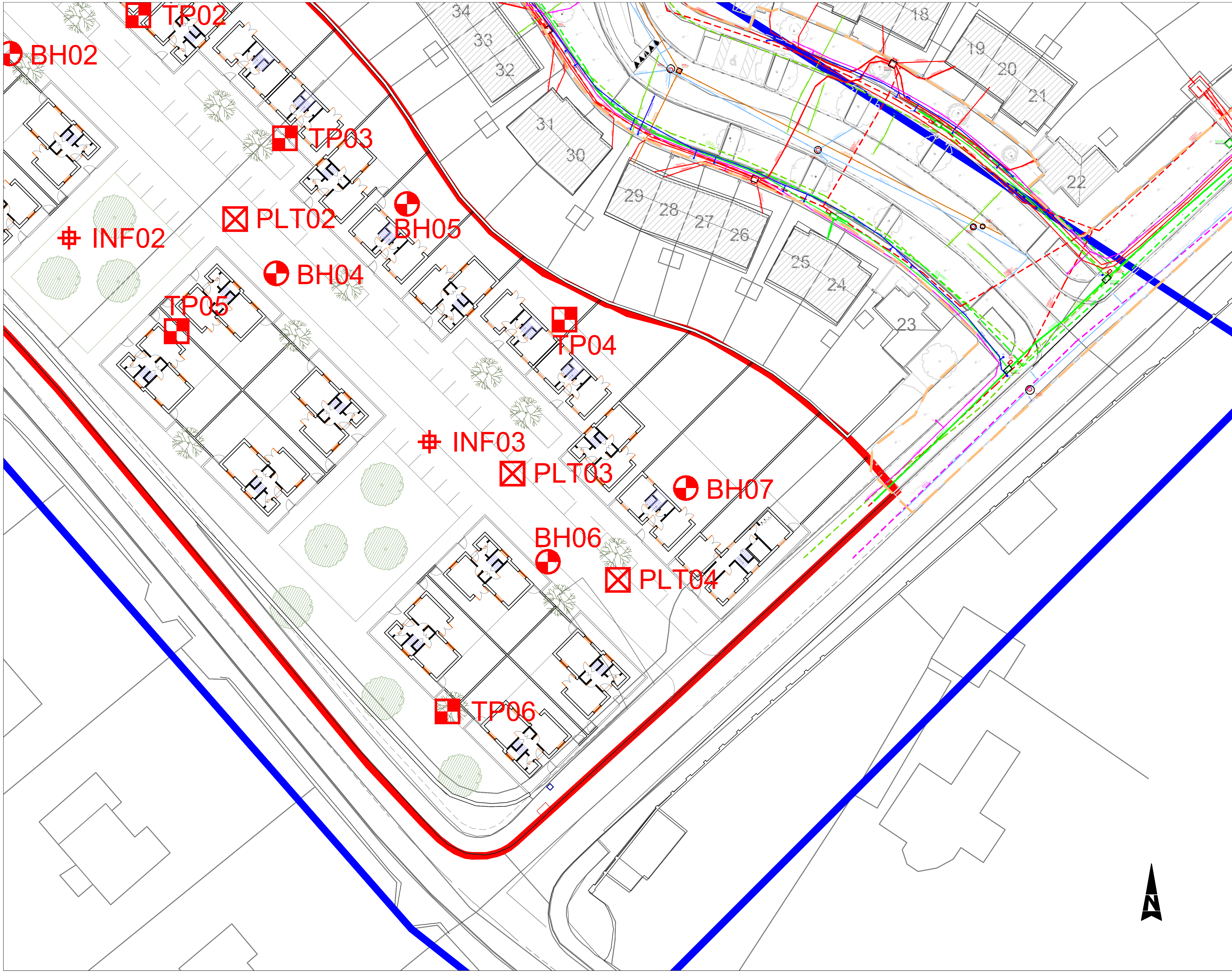


KEY:

- BH00 Denotes Borehole location
- TP00 Denotes Trial Pit location
- PLT00 Denotes Plate Load Test location
- INF00 Denotes Infiltration Test location

JOB NAME:	Raheen, Athenry, Co. Galway.
Sheet Title:	Exploratory Location Layout
JOB NUMBER:	P25183
DRAWING NUMBER:	P25183-SI-01
DRAWN BY:	Gary Curtin
DATE:	13/10/2025
SCALE:	1:500 ON A3
APPROVED:	GH
REVISION:	D01

pgl priority geotechnical



KEY:
- BH00 Denotes Borehole location
- TP00 Denotes Trial Pit location
- PLT00 Denotes Plate Load Test location
- INF00 Denotes Infiltration Test location

JOB NAME:
Raheen,
Athenry,
Co. Galway.

Sheet Title:
Exploratory Location Layout

JOB NUMBER:
P25183

DRAWING NUMBER:
P25183-SI-02

DRAWN BY:
Gary Curtin

DATE:
13/10/2025

SCALE:	APPROVED:
1:500 ON A3	GH

REVISION:
D01

pgl priority geotechnical

Project Id:	P25183	Title:	Site Plan
Project Title:	Raheen Athenry - Site Investigation	Scale:	1:1500
Location:	Raheen, Athenry, Co Galway	Engineer:	SDS Design Engineers
Client:	Galway County Council	Contractor:	PGL

Legend Key

○ Locations By Type - Empty

■ Locations By Type - TP

KEY TO SYMBOLS ON EXPLORATORY HOLE RECORDS

GENERAL

m	Meter
mm	Millimetres
BGL	Below existing ground level
mOD	Level to OD Malin
TP	Trial Pit
ST	Slit Trench
CP	Cable Percussion Borehole
RC	Rotary Cored Borehole
IP	Inspection Pit
FP	Foundation Pit
DP	Dynamic Probe
Geobore S	Geobore S Borehole

SAMPLES

B	Bulk disturbed sample
D	Small disturbed sample
U	Undisturbed sample
WS	Dynamic sample/ window sample
ENV	Environmental sample
SPLTLS	Split spoon sample
CBR	California Bearing Ratio mould sample

RECOVERY AND ROCK QUALITY

TCR %	Total Core Recovery (% of Core Run)
SCR %	Solid Core Recovery (length of core having at least one full diameter as % of core run) RQD
RQD %	Rock Quality Designation (length of solid core greater than 100mm as % of core run)
FI	Fracture Index (Measured over length of core run)
NI	Non intact
AVG	Average distance between fractures
MAX	Maximum distance between fractures
MIN	Minimum distance between fractures

GROUNDWATER

Strike	▽
Level after standing	▼

IN-SITU TESTING

N	Standard Penetration Test - Blows required to drive 300mm after seating drive
C	Standard Penetration Test - 60Cone
S	Standard Penetration Test – Split Spoon

Soil and rock descriptions are based on the guidance in BS5930:2015, The Code of Practice for Site Investigation

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Trial Pit No SA01	Sheet 1 of 1		
Project Name: Raheen Athenry	**Project No.** P25183	**Co-ords:** 549381E - 727925N **Level:** 41.66m OD	**Date** 08/10/2025
Location: Raheen, Athenry, Co Galway		**Dimensions (m):** 2.80 x 0.50	**Scale** 1:25
Client: Galway County Council		**Depth:** 1.70m BGL	**Logged** DS

Water Strike & Backfill	Samples & In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m OD)	Legend	Stratum Description
							TOPSOIL.
	0.50 0.50	B D		0.40	41.26		Greyish brown, slightly sandy slightly gravelly SILT with very high boulder content. Sand is fine to coarse. Gravel is fine to coarse and sub-angular to sub-rounded. Boulders are sub-rounded, limestone lithology and 200-500mm in diameter. *Pale greyish brown in colour.*
	1.00 1.00	B D					
				1.70	39.97		End of Pit at 1.700m

Depth scale: 1, 2, 3, 4, 5

Stability: Good
Plant: 8.5t track machine
Backfill: Arisings.
Groundwater: None encountered.

Remarks: Pit terminated at 1.70m bgl, refusal on possible bedrock. Soakaway test carried out.

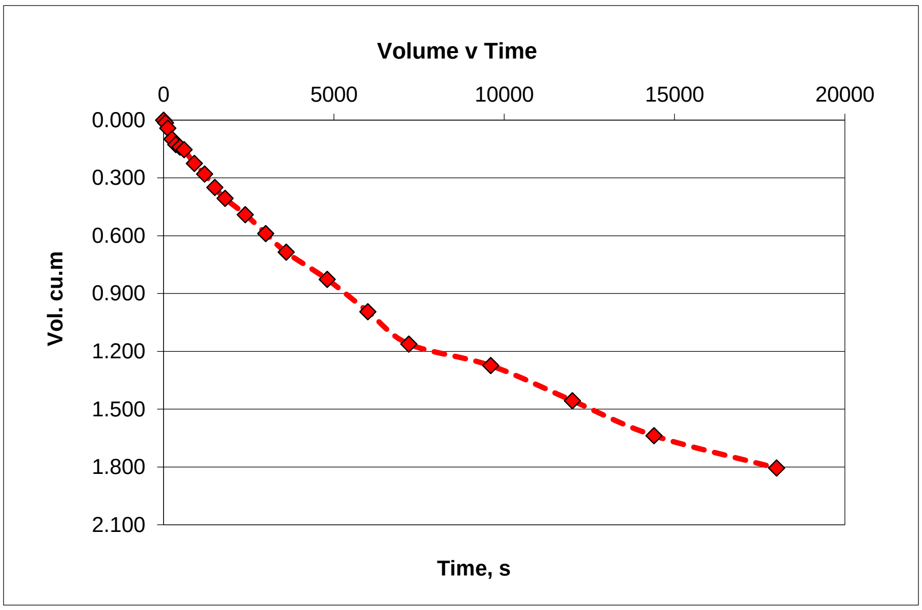
P25183 **Raheen Athenry** **09/10/2025**

Test 1 **SA01**

l, m	**2.800**	b, m	**0.500**	d, m	**1.700**
l_base, m	**2.800**			d_eff, m	**1.300**
l_eff, m	**2.800**				

Time, min	Measure, m bgl	Time, sec	Depth water, m	Fall, m	Volume
0	0.400	0	1.30	0.00	0.000
1	0.410	60	1.29	0.01	0.014
2	0.430	120	1.27	0.03	0.042
4	0.470	240	1.23	0.07	0.098
6	0.490	360	1.21	0.09	0.126
8	0.500	480	1.20	0.10	0.140
10	0.510	600	1.19	0.11	0.154
15	0.560	900	1.14	0.16	0.224
20	0.600	1200	1.10	0.20	0.280
25	0.650	1500	1.05	0.25	0.350
30	0.690	1800	1.01	0.29	0.406
40	0.750	2400	0.95	0.35	0.490
50	0.820	3000	0.88	0.42	0.588
60	0.890	3600	0.81	0.49	0.686
80	0.990	4800	0.71	0.59	0.826
100	1.110	6000	0.59	0.71	0.994
120	1.230	7200	0.47	0.83	1.162
160	1.310	9600	0.39	0.91	1.274
200	1.440	12000	0.26	1.04	1.456
240	1.570	14400	0.13	1.17	1.638
300	1.690	18000	0.01	1.29	1.806

Area	1.400 m^2	$V_{p75\text{-}25\ theory}$	volume	0.9100	m^3
50% Area_eff, a_{p50}	5.690 m^2	$V_{p\ 75\ -\ 25\ actual}$	volume	0.9030	m^3
50% Area_act, a_{p50}	5.657 m^2	$t_{p\ 75\text{-}\ 25\ actual}$	time	8454	s
	Infiltration Coefficient		*f*	1.89E-05	ms^-1



Photographic Record

Number:	**SA01**	**Project** **Project No** **Engineer**	Raheen, Athenry, Co. Galway P25183 SDS

Photographic Record

Number:	**SA01**	**Project** **Project No** **Engineer**	Raheen, Athenry, Co. Galway P25183 SDS	

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Trial Pit No **SA02** Sheet 1 of 1

Project Name: Raheen Athenry	**Project No.** P25183	**Co-ords:** 549411E - 727894N **Level:** 41.66m OD	**Date** 08/10/2025
Location: Raheen, Athenry, Co Galway		**Dimensions (m):** 3.00 x 0.50	**Scale** 1:25
Client: Galway County Council		**Depth:** 2.00m BGL	**Logged** DS

Water Strike & Backfill	Samples & In Situ Testing Depth (m)	Type	Results	Depth (m)	Level (m OD)	Legend	Stratum Description
				0.20	41.46		TOPSOIL.
	0.50 0.50	B D					Greyish brown, slightly silty slightly sandy slightly gravelly CLAY. Sand is fine to coarse. Gravel is fine to coarse and angular to sub-rounded. *Lighter greyish brown in colour.*
	1.00 1.00	B D					
	2.00 2.00	B D		2.00	39.66		End of Pit at 2.000m

Stability: Good
Plant: 8.5t track machine
Backfill: Arisings.
Groundwater: None encountered.
Remarks: Pit terminated at 2.00m bgl. Reached required depth. Soakaway test carried out.

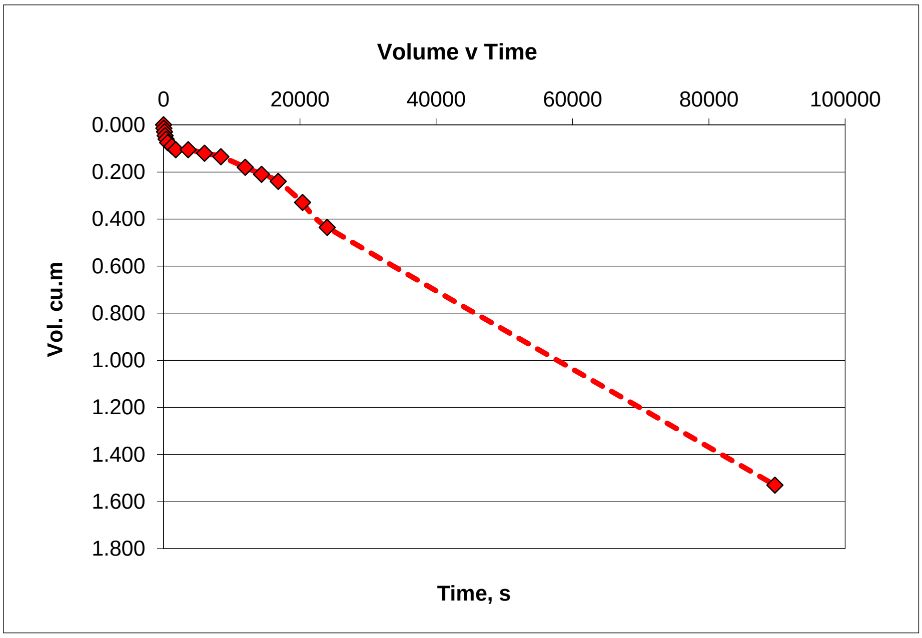
P25183 **Raheen Athenry** **09/10/2025**

Test 1 **SA02**

l, m	**3.000**	b, m	**0.500**	d, m	**2.000**
l_base, m	**3.000**			d_eff, m	**1.500**
l_eff, m	**3.000**				

Time, min	Measure, m bgl	Time, sec	Depth water, m	Fall, m	Volume
0	0.500	0	1.50	0.00	0.000
1	0.510	60	1.49	0.01	0.015
2	0.520	120	1.48	0.02	0.030
4	0.530	240	1.47	0.03	0.045
6	0.540	360	1.46	0.04	0.060
10	0.550	600	1.45	0.05	0.075
20	0.560	1200	1.44	0.06	0.090
30	0.570	1800	1.43	0.07	0.105
60	0.570	3600	1.43	0.07	0.105
100	0.580	6000	1.42	0.08	0.120
140	0.590	8400	1.41	0.09	0.135
200	0.620	12000	1.38	0.12	0.180
240	0.640	14400	1.36	0.14	0.210
280	0.660	16800	1.34	0.16	0.240
340	0.720	20400	1.28	0.22	0.330
400	0.790	24000	1.21	0.29	0.435
1495	1.520	89700	0.48	1.02	1.530

Area	1.500 m^2	$V_{p75-25\ theory}$	volume	1.1250 m^3	
50% Area_eff, a_{p50}	6.750 m^2	$V_{p\ 75-25\ actual}$	volume	0.7650 m^3	
50% Area_act, a_{p50}	5.070 m^2	$t_{p\ 75-25\ actual}$	time	44505 s	
	Infiltration Coefficient		*f*	3.39E-06 ms^-1	



Photographic Record

Number:	**SA02**	**Project** **Project No** **Engineer**	Raheen, Athenry, Co. Galway P25183 SDS	

Photographic Record

Number:	**SA02**	**Project** **Project No** **Engineer**	Raheen, Athenry, Co. Galway P25183 SDS

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Trial Pit No **SA03**
Sheet 1 of 1

Project Name: Raheen Athenry	**Project No.** P25183	**Co-ords:** 549461E - 727866N **Level:** 42.14m OD	**Date** 08/10/2025
Location: Raheen, Athenry, Co Galway		**Dimensions (m):** 3.00 x 0.50	**Scale** 1:25
Client: Galway County Council		**Depth:** 1.10m BGL	**Logged** DS

Water Strike & Backfill	Samples & In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m OD)	Legend	Stratum Description
				0.30	41.84		TOPSOIL.
	0.50 0.50	B D					
	1.00 1.00	B D		1.10	41.04		Greyish brown, slightly sandy very gravelly SILT with high boulder content. Sand is fine to coarse. Gravel is fine to coarse and angular to sub-rounded. Boulders are angular to sub-angular, limestone lithology and 200-400mm in diameter.
							End of Pit at 1.100m

Stability: Good
Plant: 8.5t track machine
Backfill: Arisings.
Groundwater: None encountered.
Remarks: Pit terminated at 1.10m bgl, refusal on possible bedrock. Soakaway test carried out.

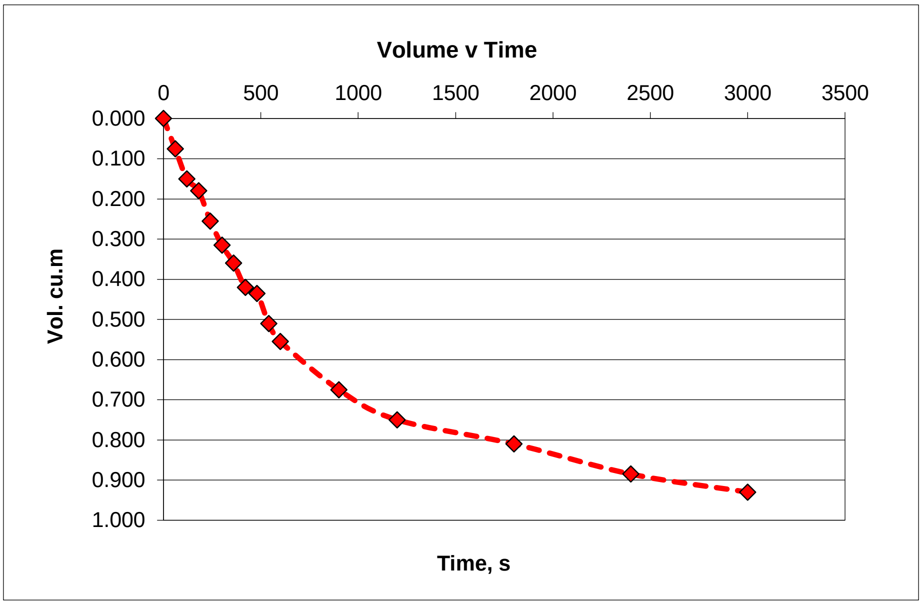
P25183 **Raheen Athenry** **08/10/2025**

Test 1 **SA03**

l, m	**3.000**	b, m	**0.500**	d, m	**1.100**
l_base, m	**3.000**			d_eff, m	**0.800**
l_eff, m	**3.000**				

Time, min	Measure, m bgl	Time, sec	Depth water, m	Fall, m	Volume
0	0.300	0	0.80	0.00	0.000
1	0.350	60	0.75	0.05	0.075
2	0.400	120	0.70	0.10	0.150
3	0.420	180	0.68	0.12	0.180
4	0.470	240	0.63	0.17	0.255
5	0.510	300	0.59	0.21	0.315
6	0.540	360	0.56	0.24	0.360
7	0.580	420	0.52	0.28	0.420
8	0.590	480	0.51	0.29	0.435
9	0.640	540	0.46	0.34	0.510
10	0.670	600	0.43	0.37	0.555
15	0.750	900	0.35	0.45	0.675
20	0.800	1200	0.30	0.50	0.750
30	0.840	1800	0.26	0.54	0.810
40	0.890	2400	0.21	0.59	0.885
50	0.920	3000	0.18	0.62	0.930

Area	1.500 m^2	$V_{p75\text{-}25\ theory}$	volume	0.6000 m^3
50% Area_eff, a_{p50}	4.300 m^2	$V_{p\ 75\ -\ 25\ actual}$	volume	0.4650 m^3
50% Area_act, a_{p50}	3.670 m^2	$t_{p\ 75\text{-}\ 25\ actual}$	time	768 s
Infiltration Coefficient		*f*		1.65E-04 ms^-1



Photographic Record

Number:	**SA03**	**Project** **Project No** **Engineer**	Raheen, Athenry, Co. Galway P25183 SDS

Photographic Record

Number:	**SA03**	**Project** Raheen, Athenry, Co. Galway **Project No** P25183 **Engineer** SDS	

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Trial Pit No **SA04**

Project Name: Raheen Athenry	**Project No.** P25183	**Co-ords:** 549405E - 727949N **Level:** 42.05m OD	**Date** 08/10/2025
Location: Raheen, Athenry, Co Galway		**Dimensions (m):** 2.30 x 0.50	**Scale** 1:25
Client: Galway County Council		**Depth:** 2.20m BGL	**Logged** DS

Water Strike & Backfill	Samples & In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m OD)	Legend	Stratum Description
							TOPSOIL.
	0.50 0.50 1.00 1.00	B D B D		0.20	41.85		Greyish brown, sandy gravelly SILT. Sand is fine to coarse. Gravel is fine to coarse and sub-rounded to rounded.
	2.00 2.00	B D		1.70	40.35		Light grey with yellow mottling, slightly gravelly very sandy CLAY. Sand is fine to coarse. Gravel is fine to coarse and sub-angular to sub-rounded.
				2.20	39.85		End of Pit at 2.200m

Depth scale: 1, 2, 3, 4, 5

Stability: Moderate
Plant: 8.5t track machine
Backfill: Arisings.
Groundwater: None encountered.
Remarks: Pit terminated at 2.20m bgl. Reached required depth. Soakaway test carried out.

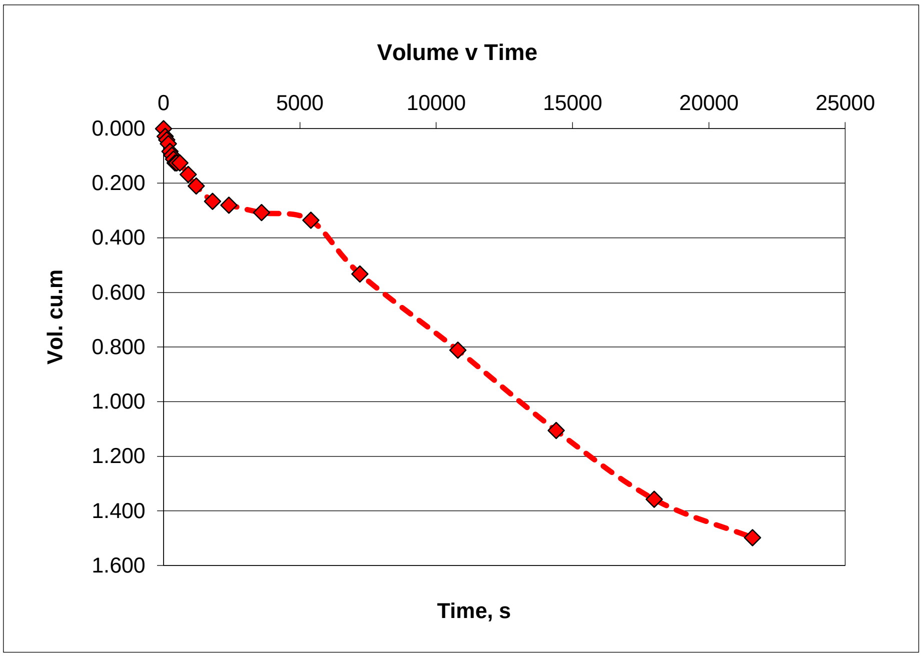
P25183 **Raheen Athenry** **09/10/2025**

Test 1 **SA04**

l, m	**2.800**	b, m	**0.500**	d, m	**2.000**
l_base, m	**2.800**			d_eff, m	**1.500**
l_eff, m	**2.800**				

Time, min	Measure, m bgl	Time, sec	Depth water, m	Fall, m	Volume
0	0.500	0	1.50	0.00	0.000
1	0.520	60	1.48	0.02	0.028
2	0.530	120	1.47	0.03	0.042
3	0.540	180	1.46	0.04	0.056
4	0.560	240	1.44	0.06	0.084
5	0.570	300	1.43	0.07	0.098
6	0.580	360	1.42	0.08	0.112
7	0.590	420	1.41	0.09	0.126
8	0.590	480	1.41	0.09	0.126
10	0.590	600	1.41	0.09	0.126
15	0.620	900	1.38	0.12	0.168
20	0.650	1200	1.35	0.15	0.210
30	0.690	1800	1.31	0.19	0.266
40	0.700	2400	1.30	0.20	0.280
60	0.720	3600	1.28	0.22	0.308
90	0.740	5400	1.26	0.24	0.336
120	0.880	7200	1.12	0.38	0.532
180	1.080	10800	0.92	0.58	0.812
240	1.290	14400	0.71	0.79	1.106
300	1.470	18000	0.53	0.97	1.358
360	1.570	21600	0.43	1.07	1.498

Area	1.400 m^2	$V_{p75-25\ theory}$	volume	1.0500	m^3
50% Area_eff, a_{p50}	6.350 m^2	$V_{p\ 75-25\ actual}$	volume	0.7490	m^3
50% Area_act, a_{p50}	4.931 m^2	$t_{p\ 75-25\ actual}$	time	9010	s
	Infiltration Coefficient		*f*	1.69E-05	ms^-1



Photographic Record

Number:	**SA04**	**Project** **Project No** **Engineer**	Raheen, Athenry, Co. Galway P25183 SDS	

Photographic Record

Number:	**SA04**	**Project** **Project No** **Engineer**	Raheen, Athenry, Co. Galway P25183 SDS	

Priority Geotechnical Ltd. Tel: 021 4631600 Fax: 021 4638690 www.prioritygeotechnical.ie	Trial Pit No **SA05** Sheet 1 of 1

Project Name: Raheen Athenry	**Project No.** P25183	**Co-ords:** 549466E - 727975N **Level:** 43.02m OD	**Date** 09/10/2025
Location: Raheen, Athenry, Co Galway		**Dimensions (m):** 1.80 × 0.50	**Scale** 1:25
Client: Galway County Council		**Depth:** 1.50m BGL	**Logged** DS

Water Strike & Backfill	Samples & In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m OD)	Legend	Stratum Description
				0.20	42.82		TOPSOIL.
	0.50 0.50	B D					Greyish brown, slightly gravelly very sandy SILT with high boulder content. Sand is fine to coarse. Gravel is fine to coarse and angular to sub-rounded. Boulders are sub-angular to sub-rounded, limestone lithology and 200-300mm in diameter.
	1.00 1.00	B D		1.50	41.52		
							End of Pit at 1.500m

Stability: Good
Plant: 8..5t track machine
Backfill: Arisings.

Groundwater: None encountered.

Remarks: Pit terminated at 1.50m bgl, refusal on possible bedrock. Soakaway test carried out.

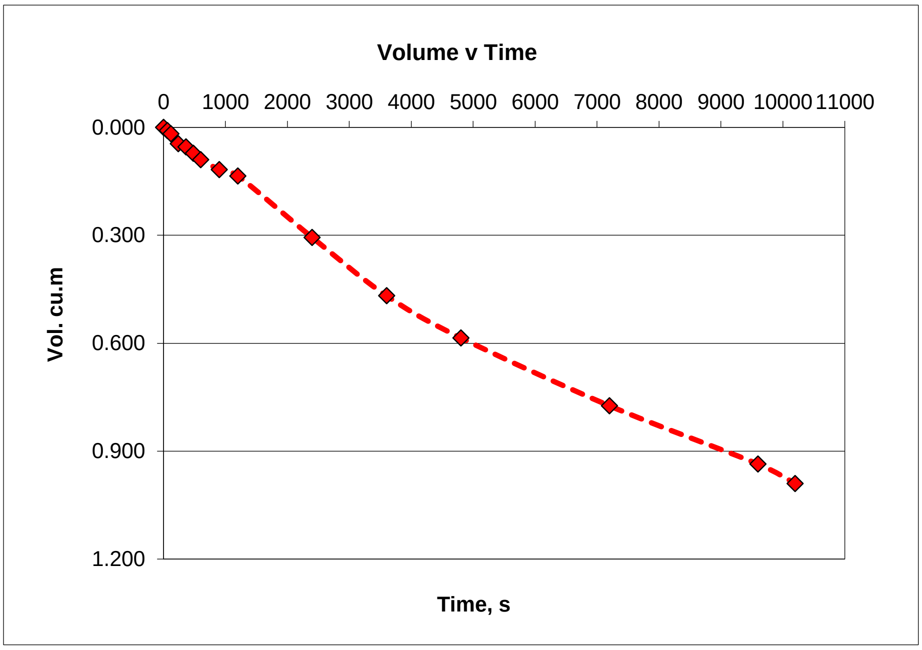
P25183 **Raheen Athenry** **09/10/2025**

Test 1 **SA05**

l, m	**1.800**	b, m	**0.500**	d, m	**1.500**
l_base, m	**1.800**			d_eff, m	**1.230**
l_eff, m	**1.800**				

Time, min	Measure, m bgl	Time, sec	Depth water, m	Fall, m	Volume
0	0.270	0	1.23	0.00	0.000
1	0.280	60	1.22	0.01	0.009
2	0.290	120	1.21	0.02	0.018
4	0.320	240	1.18	0.05	0.045
6	0.330	360	1.17	0.06	0.054
8	0.350	480	1.15	0.08	0.072
10	0.370	600	1.13	0.10	0.090
15	0.400	900	1.10	0.13	0.117
20	0.420	1200	1.08	0.15	0.135
40	0.610	2400	0.89	0.34	0.306
60	0.790	3600	0.71	0.52	0.468
80	0.920	4800	0.58	0.65	0.585
120	1.130	7200	0.37	0.86	0.774
160	1.310	9600	0.19	1.04	0.936
170	1.370	10200	0.13	1.10	0.990

Area	0.900	m^2	$V_{p75\text{-}25 \text{ theory}}$	volume	0.5535	m^3
50% Area_eff, a_{p50}	3.729	m^2	$V_{p\ 75\ -\ 25 \text{ actual}}$	volume	0.4950	m^3
50% Area_act, a_{p50}	3.430	m^2	$t_{p\ \ 75\text{-}\ 25 \text{ actual}}$	time	4800	s
			Infiltration Coefficient	*f*	3.01E-05	ms^-1



Photographic Record

Number:	**SA05**	**Project** **Project No** **Engineer**	Raheen, Athenry, Co. Galway P25183 SDS	

Photographic Record

Number:	**SA05**	**Project** **Project No** **Engineer**	Raheen, Athenry, Co. Galway P25183 SDS	

Priority Geotechnical Ltd. Tel: 021 4631600 Fax: 021 4638690 www.prioritygeotechnical.ie	Trial Pit No **SA06** Sheet 1 of 1

Project Name: Raheen Athenry	**Project No.** P25183	**Co-ords:** 549495E - 727975N **Level:** 43.90m OD	**Date** 09/10/2025
Location: Raheen, Athenry, Co Galway		**Dimensions (m):** 2.00 x 0.50	**Scale** 1:25
Client: Galway County Council		**Depth:** 1.70m BGL	**Logged** DS

Water Strike & Backfill	Samples & In Situ Testing: Depth (m)	Type	Results	Depth (m)	Level (m OD)	Legend	Stratum Description
				0.20	43.70		MADE GROUND/ TOPSOIL.
	0.50 0.50	B D		0.80	43.10		(MADE GROUND). Brown, slightly gravelly sandy SILT with high boulder content and concrete blocks. Sand is fine to coarse. Gravel is fine to coarse and angular to sub-rounded. Boulders are sub-angular, limestone lithology and 200-400mm in diameter.
	1.00 1.00	B D		1.70	42.20		Greyish brown, slightly gravelly very sandy SILT. Sand is fine to coarse. Gravel is fine to coarse and angular to sub-rounded.
							End of Pit at 1.700m

Stability: Good
Plant: 8.5t track machine
Backfill: Arisings.

Groundwater: None encountered.

Remarks: Pit terminated at 1.70m bgl, refusal on possible bedrock. Soakaway test carried out.

P25183 Raheen Athenry 09/10/2025

Test 1 SA06

l, m	2.000	b, m	0.500	d, m	1.700
l_base, m	2.000			d_eff, m	1.400
l_eff, m	2.000				

Time, min	Measure, m bgl	Time, sec	Depth water, m	Fall, m	Volume
0	0.300	0	1.40	0.00	0.000
1	0.310	60	1.39	0.01	0.010
2	0.320	120	1.38	0.02	0.020
3	0.340	180	1.36	0.04	0.040
4	0.360	240	1.34	0.06	0.060
6	0.390	360	1.31	0.09	0.090
8	0.420	480	1.28	0.12	0.120
10	0.450	600	1.25	0.15	0.150
20	0.510	1200	1.19	0.21	0.210
30	0.630	1800	1.07	0.33	0.330
40	0.730	2400	0.97	0.43	0.430
60	0.860	3600	0.84	0.56	0.560
80	0.960	4800	0.74	0.66	0.660
120	1.110	7200	0.59	0.81	0.810
160	1.200	9600	0.50	0.90	0.900
180	1.310	10800	0.39	1.01	1.010

Area	1.000 m^2	$V_{p75\text{-}25\ theory}$	volume	0.7000	m^3
50% Area_eff, a_{p50}	4.500 m^2	$V_{p\ 75\ -\ 25\ actual}$	volume	0.5050	m^3
50% Area_act, a_{p50}	3.525 m^2	$t_{p\ \ 75\text{-}\ 25\ actual}$	time	4950	s
	Infiltration Coefficient		f	2.89E-05	ms^-1